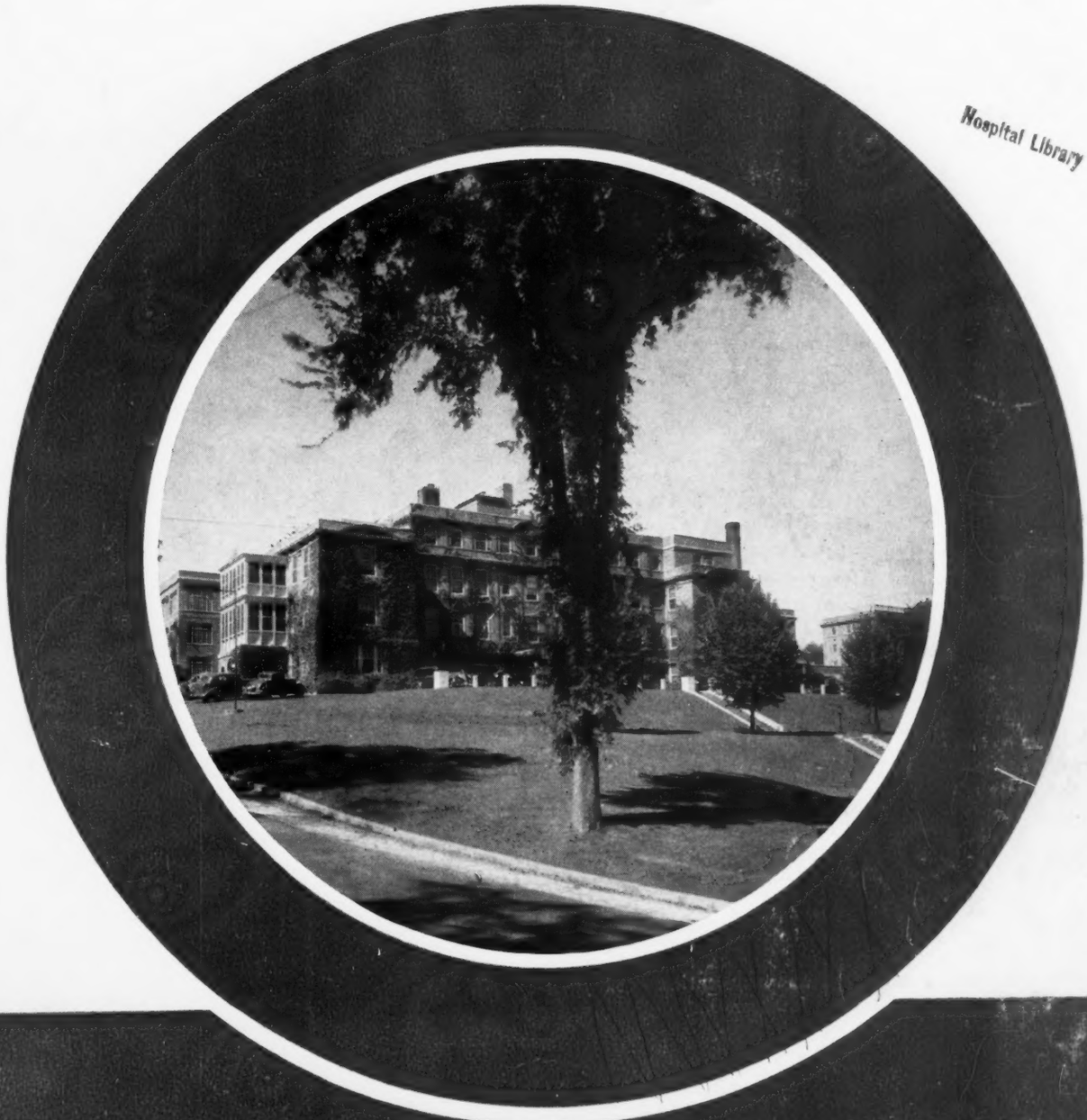
JUN 30 1939

Hospital Library



the MODERN HOSPITAL

VOLUME 53 JULY 1939 NUMBER 1

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Easy to Prepare—*Just Return the Water*

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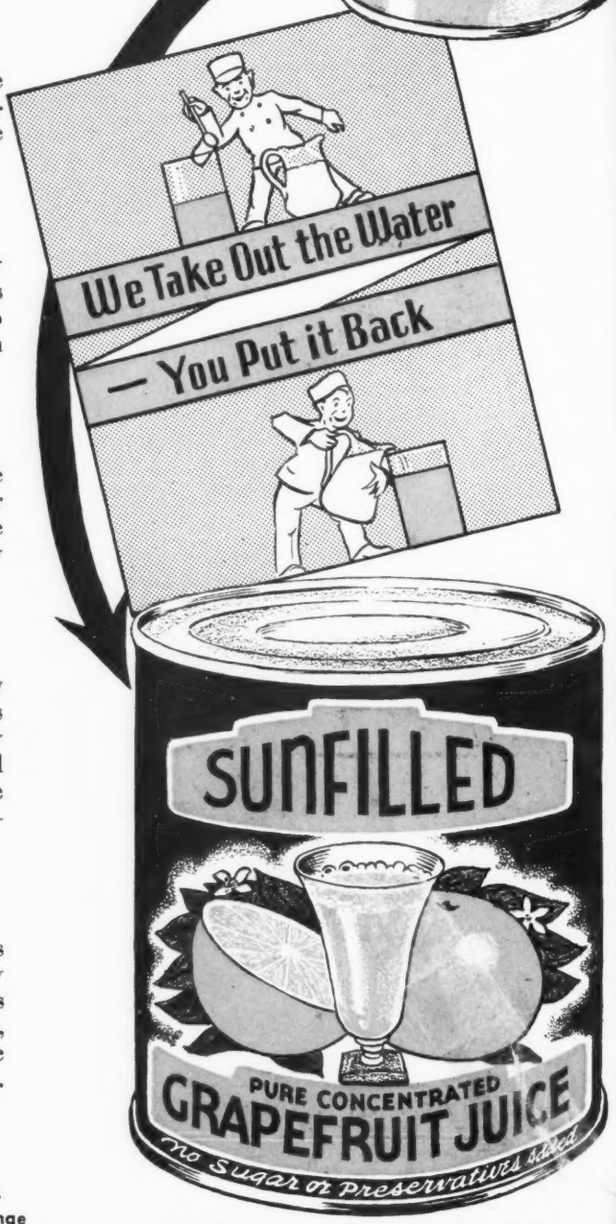

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Just in Passing—

THE hearings on the Wagner National Health Bill have disclosed that, while there is disagreement over the bill in its present form and criticism of certain features, there is also substantial support from certain influential groups for improvements in the provision of medical service. Hospitals, of course, have been hard at work for six years developing hospital care insurance plans to meet the public's needs. Already these plans are meeting part of the problem of medical costs. They need expansion in various ways and extension into new areas. One important extension that is needed is into rural regions. Minnesota, which boasts the second largest hospital care insurance plan in the United States, is taking steps to extend its plan to rural regions. This naturally is attended by certain problems that will be discussed in next month's issue of the magazine by E. A. van Steenwyk, executive director of the Minnesota Hospital Service Association.

TWO articles of special interest to nurses are scheduled for next month. In one, Dr. Benjamin R. Shore of St. Luke's Hospital, New York City, discusses the various positions of the patient upon the operating room table. He outlines the precautions necessary with each position. The other article is by Dr. Jack Ewalt of Colorado Psychopathic Hospital, Denver, and deals with the psychologic preparation of the patient for operation.

SINCE medieval times hospitals have commonly provided for the ministrations of religion to their patients. Occasionally, however, the minister fails to realize the psychologic condition of the patient. By careful study of his opportunities and responsibilities, he can frequently improve his relations with patients and with their physicians. The Rev. Russell L. Dicks, co-author with the late Dr. Richard Cabot of "The Art of Ministering to the Sick," has prepared an interesting summary of the functions of the

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clergyman in the sickroom. This will appear in the August number.

YOU may think we are too forehanded, but actually we aren't. It is never too early to discuss the problem of hospital annual reports. A great many of them are sent to us each year. We are glad to have these and would like other hospitals to put us on their annual report list. These reports differ greatly in the extent to which they attract the reader. The report of the Rhode Island Hospital stands out because of its effective format and presentation. Next month Dr. William O. Rice, the administrator, will discuss the content and presentation of annual reports.

OF COURSE, you have been following the material in the Trustee Forum; no problem today is of more importance than that of giving trustees all of the information they need to make wise decisions. Next month an article of unusual value will appear under the signature of Dr. E. M. Bluestone of Montefiore Hospital, New York. He deals frankly with the subject, "What I Expect From My Board." No, don't worry. He showed the article to the president of his board before sending it in. Many other administrators will probably want to show it to their board members also. In September a lay administrator will write on the same subject.

FRANK E. DENISTON has been appointed executive director of the Chicago Plan for Hospital Care. Mr. Deniston has been acting director since the resignation of Perry Addleman.

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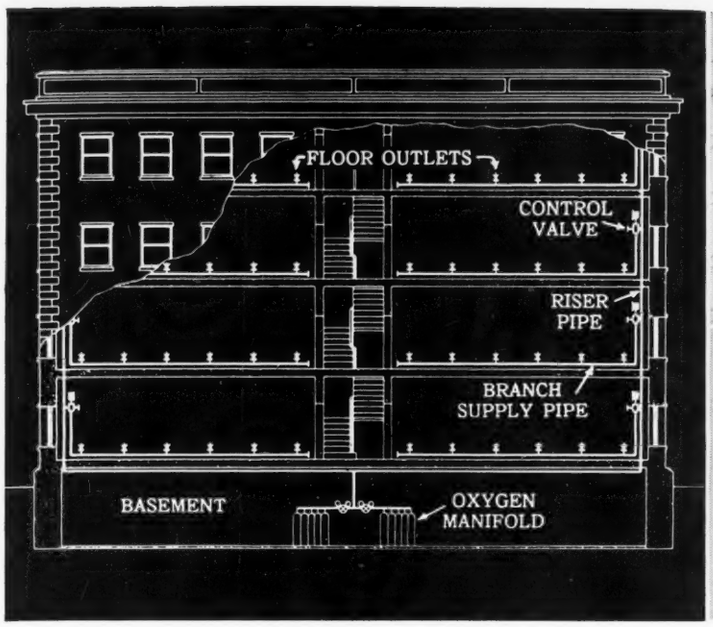

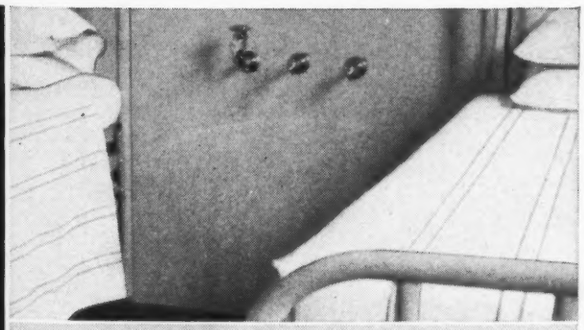

Above—From bedside oxygen outlets, any type of equipment — face masks, nasal catheters, or oxygen tents—can be used.

Left—A centralized oxygen supply eliminates oxygen waste, cuts down cylinder handling, and makes a constant supply available throughout the hospital.

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In hospitals not piped for oxygen, a Linde cylinder strapped to the bed provides many hours of service.

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2. Linde maintains a library of reprints of up-to-date articles on the clinical—as well as the mechanical—aspects of oxygen therapy.

3. A new Linde motion picture, made in co-operation with leading hospitals, is available on request for showings to give hospital personnel helpful, practical suggestions on the effective and economical operation of oxygen therapy equipment.

4. The Linde "Handbook of Current Practices In Operating Oxygen Therapy Equipment" is widely used by hospital staffs as a textbook and ready reference on the mechanical aspects of oxygen therapy. You can have it without obligation—just send the coupon.

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All Linde oxygen cylinders are marked: "This cylinder contains Linde Oxygen U.S.P." The standard Linde cylinder contains 220 cubic feet of oxygen—the equivalent of 1,650 gallons or 6,230 liters.

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- ☐ Send a copy of the Linde "Handbook."
- ☐ Arrange for a showing of the Linde motion picture at our hospital.
- ☐ Send a representative.

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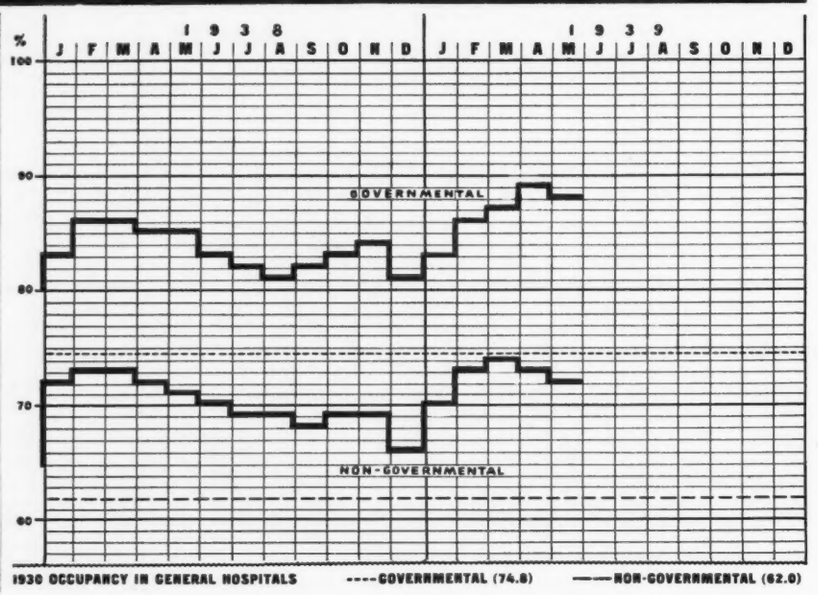
HOSPITAL OCCUPANCY BAROMETER

Type and Place	Census Data on Reporting Hospitals: Hosp.[1]	Beds[2]	1939: May	1939: April	1938: May	1938: April
Government						
New York City	17	11,027	106	107	103	102
New Jersey	4	2,122	93*	93*	91	89
Washington, D. C.	1	1,220	70*	70*	70*	70*
N. and S. Carolina	19	2,102	70	71	70	69
New Orleans	2	2,466	114	112	97	99
San Francisco	3	2,255	92	93	88	92
St. Paul	1	856	70	76	72	73
Chicago	2	3,619	88	90	87	86
Total[4]	49	25,661	88*	89*	85*	85*
Nongovernment						
New York City[3]	68	15,194	77*	77*	77	77
New Jersey	60	9,772	78*	78*	69	71
Washington, D. C.	9	1,818	72*	72*	72*	72
N. and S. Carolina	105	7,140	65	67	66	67
New Orleans	7	1,176	68	69*	73	73*
San Francisco	16	3,178	75	74	69	71
St. Paul	9	1,150	72	79	70	75
Chicago	12	2,238	62	66	65	64
Cleveland	6	928	81	80	75	78
Total[4]	292	42,594	72*	74*	71*	72*

[1]Excluding hospitals for tuberculous and mental patients and institutional hospitals. Census data are for most recent month. [2]Including bassinets, usually. [3]General hospitals only. [4]Occupancy totals are unweighted averages. *Preliminary report. Complete occupancy figures for January, 1933, to October, 1938, are given on page 798 of The Seventeenth Hospital Yearbook.



Occupancy Is Relatively High

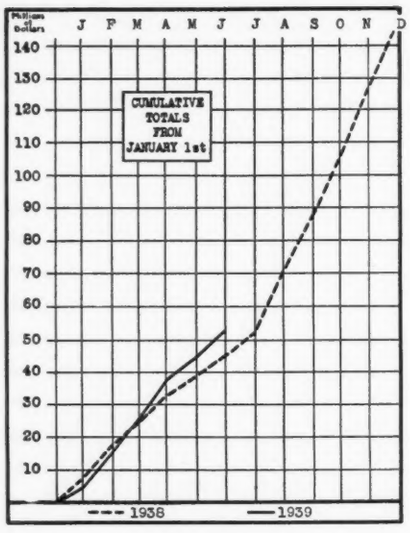
Occupancy in nongovernmental general hospitals continued at a relatively high level during May, although droping slightly from the March and April peak. Revised figures for March show an occupancy of 75 per cent, the highest figure so far recorded from these reporting hospitals since the present series of records was begun in January 1933. The tentative May report exceeds all previous figures for this month, except for May 1937.

Occupancy in governmental general hospitals continues at a high level, several points above the figures reported for 1938 and 1937. In both New York City and New Orleans, the governmental general hospitals are crowded beyond capacity. In New Orleans this situation is temporary, pending the opening of the new Charity Hospital.

A total of slightly more than $8,000,000 of new hospital construction projects was reported in the period of four weeks ending June 19. This brings the total of new projects since January 1 to $52,367,000, which may be compared with $44,010,000 for the same period of 1938. The majority of last year's construction projects, however, were started in the second six months of the year.

There were 50 new building projects reported during the recent four week period; only 41 of these reported their costs. Eight new hospitals are to cost $2,535,000; 39 additions were reported of which 30 gave costs totaling $5,512,000; there were two alterations, one of which is to cost $27,000, and one nurses' home to cost $30,000.

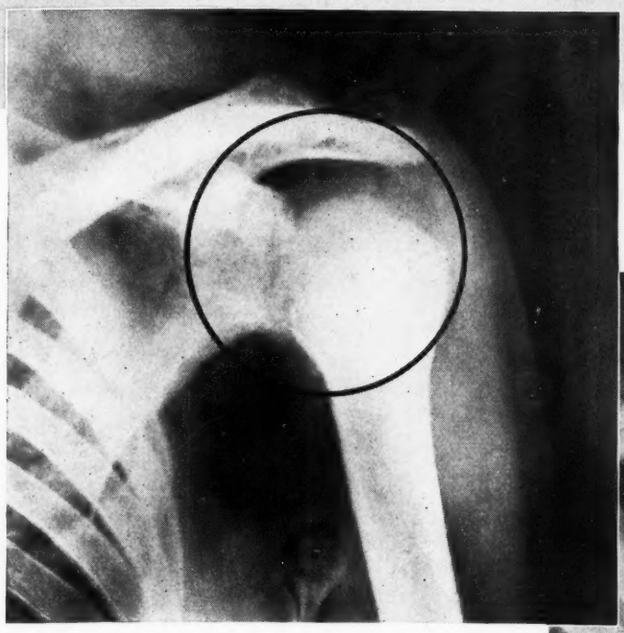
HOSPITAL CONSTRUCTION



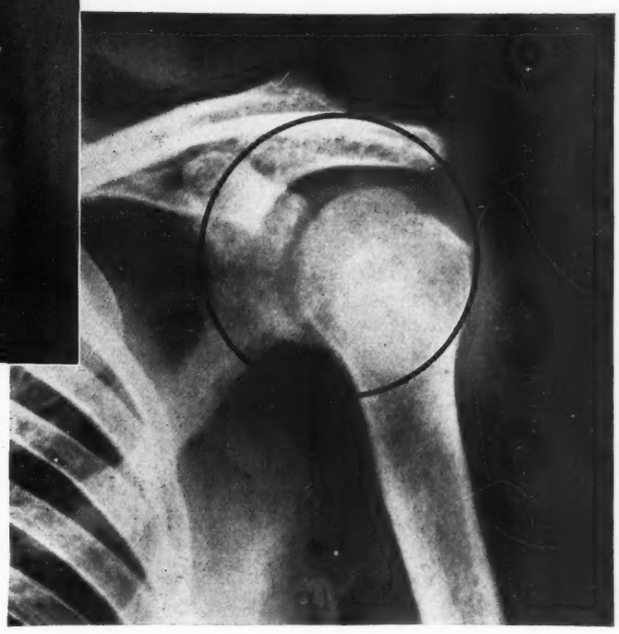
The general wholesale price index of the *New York Journal of Commerce* advanced from 74.7 on May 13 to 75.5 on May 27 and then receded again to 74.7 on June 17. Grain prices dropped during the period from 61.8 to 60.1; general food prices followed suit, declining from 65.3 to 63.7. The price indexes of textiles, fuel and building materials all advanced during the period, textiles going from 56.7 to 57.9; fuel, from 80.6 to 83.7, and building materials, from 97.9 to 98.0. (All indices are based on figures of 1927-29 as 100.) The price index on drugs and fine chemicals of the *Oil, Paint and Drug Reporter* remained practically unchanged at 183.0.

The cost of living of wage earners in the United States declined slightly, 0.2 per cent, from April to May, because of decrease in the cost of food, clothing, coal and sundries, according to the regular monthly survey made by the National Industrial Conference Board. Living costs in May were 2.0 per cent lower than in May 1938 and were 14.3 per cent lower than in May 1929; they were 18.3 per cent higher than at the low point of 1933. The sharp decline in manufacturing production, which extended into the first half of May, has to some extent been reversed. Steel production and coal output have risen sharply, but automobile production is tapering off in anticipation of the 1940 model.

JOINT REPAIR *in Arthritis*



X-ray at left, dated 10/5/36, "shows complete destruction of shoulder joint with marked bone destruction of the glenoid fossa and head of humerus."



X-ray at right, dated 11/6/36, "shows considerable improvement, increased density of the bones; the upper end of the humerus and the glenoid cavity have more clearly defined borders; joint space is visible; loose spicules of bone have been absorbed" (roentgenologist's reports).

ERTRON, high dosage vitamin D in a special form, in a large percentage of the cases treated, produces the objective improvements which constitute the final aim of arthritic therapy. Pain usually disappears with remarkable rapidity, periarticular swelling and induration yield, and mobility gradually redevelops, together with improved muscular strength, heartier appetite, weight gains, and a more hopeful outlook on life.

In all cases reported in the literature, and in the personal communications of many clinicians, the administration of Ertron does not produce alteration of the serum calcium and phosphorus levels; in the indicated dosage, it apparently exerts no untoward influence on circulation and visceral functions. Ertron is available only upon prescription or to physicians direct, in bottles of 100 capsules, each containing not less than 50,000 U.S.P. units of vitamin D. Professional correspondence is invited.

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WITH THE ROVING REPORTER • • • •

Credit Where It Is Due

• Too little recognition is given to one hospital department that is usually discovered tucked away in a dark corner of the basement, cluttered with discarded bits of this and that brought in for rejuvenation. Sometimes, but not always, it is identified with a sign on which are printed the words "Maintenance Department." Yet it is amazing what miracles are performed not only in these modest quarters but throughout hospital buildings by enthusiastic workers who have not only the knack of making something out of nothing but the skill to accomplish major alterations efficiently and economically!

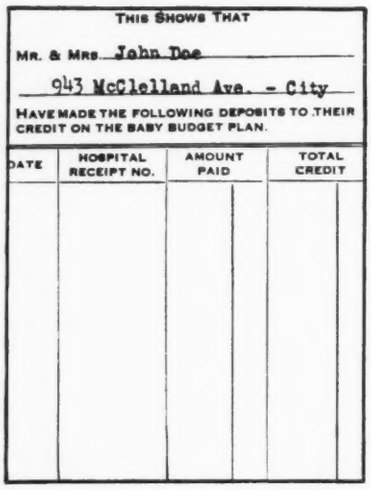
This was brought to mind in reading over the annual report of a hospital that interested your Roving Reporter because it recalled a personal visit to a room larger than many of its kind, but filled with beds in process of being refinished. This modest little department, believe it or not, last year completed 4923 repair orders of various kinds throughout the hospital. Among other things, 5000 square feet of acoustical treatment were applied to corridor ceilings, to the operating floor, where the entire corridor and scrubup rooms were treated, and to the delivery and labor rooms in the maternity division. Too, 153 rooms and 597 pieces of furniture were completely renovated and painted. That, we contend, is some record for a department about which little is ordinarily heard.

One other item of interest before we close this paragraph. We are quoting from the same report. "Our second full year with oil as fuel resulted in a saving of approximately $6000 over what we would have spent for coal."

Baby Budget Plan

• "Our baby was paid for in advance." What a thrill it is for the young father who calls at the hospital on that memorable last day to take mother and baby home to know that everything is paid and that there are no embarrassing apologies to make because of lack of funds with which to pay the bill.

The Baby Budget Plan is responsible. It has been in use for some weeks at the Latter-Day Saints Hospital, Salt Lake City, Utah, and is proving popular with doctors and patients, as well as with the hospital.



THIS SHOWS THAT

MR. & MRS. John Doe

943 McClelland Ave. - City

HAVE MADE THE FOLLOWING DEPOSITS TO THEIR CREDIT ON THE BABY BUDGET PLAN.

DATE	HOSPITAL RECEIPT NO.	AMOUNT PAID	TOTAL CREDIT

Each doctor is furnished with a supply of post-cards addressed to the hospital and to be returned to it with the names of such prospective parents as he believes might be interested. Thus the presentation of the plan to patients is left entirely to the doctor.

As the names are received, a letter is dispatched to the parents congratulating them on the expected event. "Your doctor thought you would be interested in knowing of our rates, inasmuch as you contemplate a hospital confinement where you are assured every service and facility modern science has provided for this important event in your lives," the letter reads. It goes on to describe the terms of the flat rate plan and adds:

"To make it possible for you to benefit by this flat rate, we suggest you take advantage of our 'Baby Budget Plan,' which simply means you open an account with us now (similar to a savings account) and make payments each week or month so that when the event does come you will not be harassed with worries about how you will meet the bill. Bring the enclosed Baby Budget pass book with you and make your first deposit, at which time we shall be glad to explain any points not clear to you and to show you our new modern maternity department."

The pass book is merely a small folded card with columns for entering the date, the hospital receipt number, amount paid and the total credit.

The plan was presented to and approved by the members of the staff, according to J. H. Zenger, assistant superintendent, and it is proving more and more popular as it becomes better established in the minds of the doctors.

School for Orderlies

• Step into a room in the accident suite of Orange Memorial Hospital, Orange, N. J., and it is possible that you will find a group of earnest young colored men learning to be orderlies; that is, if your visit occurs on one of the two evenings each week when this class convenes. No man is permitted to give treatments to a patient until he has had three months of such training. Then he works on the ward under the direction of the head orderly who has served the hospital in this capacity for more than ten years.

Qualifications are that the candidate must live in the state, be able to read and write, be neat in appearance and furnish adequate references from his school or last employer. Some of the men in the class have been serving as relief porters in the hospital or have been working in other departments. They take seriously their instruction in such procedures as taking temperatures; giving enemas, high colonic, rectal irrigations and admitting baths; assisting fracture patients; lifting patients from bed; preoperative preparation; setting up oxygen tents and fracture beds, and other details incident to assisting doctors and nurses.

To date, F. Stanley Howe, director of the hospital, will tell you 12 students have been admitted to the course, but no more than six can be trained at one time. Three who have completed the course are now on regular duty in the hospital and three have other posts, with doctors for example, who find their training well suited to their needs.

"During the recent epidemic," says Mr. Howe, "when a considerable number of our orderlies were taken sick, it was most convenient to have some of these students to draw on. By training boys from the community we have assurance of their personal qualifications and thereby ensure greater permanence in our regular force. Our staff of orderlies, numbering about 25, has an average length of service with the hospital of nearly seven years, showing how little turnover there is."

LOOKING FORWARD

Death of Doctor Hornsby

DR. JOHN ALLAN HORNSBY, co-founder with Dr. Otho F. Ball of The MODERN HOSPITAL, died in Washington, June 4, at the age of 77. Doctor Hornsby was the first editor of this magazine, a position that he filled with distinction.

At the time of his appointment as editor, he resigned as superintendent of Michael Reese Hospital, Chicago, a position that he had held since 1907. In 1913 Doctor Hornsby and Richard E. Schmidt published their monumental 644 page book entitled "The Modern Hospital," a book that for many years was the only standard text on the planning and operation of general hospitals. In 1917 Doctor Hornsby published in book form his series of eight papers on "The Small General Hospital." These had previously appeared in the magazine.

Doctor Hornsby was born in St. Louis, Dec. 19, 1861, and was graduated from Washington University School of Medicine in 1880. Before going to Michael Reese Hospital, he had served as assistant supervising surgeon of the Missouri Pacific Railway; coroner of St. Louis County; surgeon of the White Pass and Yukon Railway, Alaska; special quarantine officer in Nome, Alaska; medical officer of the U. S. Treasury Department at Nome, and special editorial writer for a Chicago newspaper.

One of Doctor Hornsby's outstanding contributions to the hospital field was his early advocacy of inspection and standardization of hospitals. He first proposed this in the October 1913 issue of The MODERN HOSPITAL in an article and an editorial, the first of a strongly worded series on the subject. This series was published before the American College of Surgeons held its first convocation and, four years later, the college finally decided to proceed with a standardization program.

Doctor Hornsby's editorial work was interrupted by the war. He was called to Washington as a confidential adviser to Secretary of War Baker and was made chief inspector of military hospitals in the United States and chief of the hospital construction division of the Army.

Following the war, Doctor Hornsby devoted himself to hospital consultation work and was for a time head of the Missouri Valley Industrial Hospital. For a short period he edited *Hornsby's Hospital Magazine*. He was superintendent of the University of Virginia Hospital at Charlottesville and professor in the medical school from 1926 to 1931. Failing health led to his retirement.

Doctor Hornsby may well be considered as the first American hospital journalist. The breadth and depth of his interests in hospitals were reflected in the broad approach to hospital problems manifested by this magazine.

Better Service to Mental Hospitals

THE series of articles by L. R. Bowen, recently published in this magazine, describing the new nervous and mental hospitals of the state of Missouri gave concrete evidence of the advancements that are taking place in this large group of hospitals. At one time it was certainly a euphemism, if not actually a misrepresentation, to use the term "hospital" in connection with most of these institutions. Today this situation is speedily changing.

The MODERN HOSPITAL has always upheld vigorously the idea that mental hospitals should be scientific and humane institutions maintained at high professional levels. Some patients, of course, will receive only custodial care. Many others, however, can benefit from intensive treatment that employs the new technics which a rapidly growing field of science has made available.

The magazine's work in this field was for many years guided by two outstanding administrators of mental hospitals, Dr. William A. White and Dr. J. Allen Jackson. Both have recently died. In an endeavor to fill their places adequately, many persons were consulted. We are now happy to announce that Dr. Franklin G. Ebaugh, director, Colorado Psychopathic Hospital of the University of Colorado, and Dr. William A. Bryan, administrator, Worcester State Hospital, Worcester, Mass., have accepted positions on the editorial board. These two men, representing

the East and the West, also complement each other in other ways. Doctor Ebaugh is a leader in the program for advancing the educational and scientific standards of mental hospitals. Doctor Bryan is an authority on the administrative problems concerned in the management of these institutions and is the author of "Administrative Psychiatry," the leading text on this subject. Under their combined guidance, it is expected that The MODERN HOSPITAL will serve this large section of the hospital field even more effectively in the future.

The International

ELABORATE plans are being made to make the forthcoming biennial congress of the International Hospital Association at Toronto the greatest meeting of its kind and a meeting characterized by a truly international spirit. The program, as it appears in the current issue of *Nosokomeion,* is a strong one. The first plenary session will open at 8 p.m., Tuesday, September 19, with a pageant of nations portraying the care of the patient in all countries of the world. Official greetings will be followed by the address of the president, Dr. Malcolm T. MacEachern.

With this auspicious start, the congress will carry on a well-prepared program from Wednesday through Saturday, ending with a banquet on Saturday evening. By means of the Filene-Finlay telephone translator system, each person in the audience will be able to hear the talks in the language with which he is most familiar, as all talks will be simultaneously translated into English, French, German, Italian and Spanish. Forty-four countries probably will be represented.

Hospital administrators in the United States and Canada will find in the congress an opportunity to exchange views with others engaged in the same activity under somewhat different conditions. The few extra days spent at the International may well be the most interesting and profitable of the year.

Hospital Care for the Needy

THE problems of hospital care for those on relief deserve the careful attention of all administrators and trustees as well as government officials. It is fortunate that the American Hospital Association and the American Public Welfare Association have set up a joint committee on this subject to develop a set of principles that would be acceptable to voluntary hospitals and that would be sound from the administrative and the public policy points of view.

By official action of their respective governing bodies, an outline of policies, prepared by this committee and published in the January issue of *Hospitals,* has been adopted by the two organizations. This statement merits careful reading by all concerned.

Governmental payments to voluntary hospitals for the care of the needy sick is already a widespread policy and one that, the joint statement declares, may well be extended under certain conditions. Payment should be made on the basis of services actually rendered and not on a lump sum or a subsidy basis. The per diem rate should include all charges for necessary laboratory work, x-rays, special nursing and other "incidentals." The rate must be determined in each area in accordance with local conditions.

Hospital councils or joint committees from the local hospitals should carry on all negotiations with public officials and rates of payment should be adjusted through such conference.

Public officials should recognize the increasing complexity and costliness of good hospital care, the importance and ultimate economy of a high standard of service to the patient and the close relations of hospital service to general medical practice and to public health. Hospitals should avoid internal dissension and competitive action, which would lower standards of service, and should present their case from the point of view of community needs.

It is obvious that voluntary hospitals will need to acknowledge the accepted policy that public funds should be expended through public authorities. This carries with it the likelihood of some inspection or supervision of accounts, of procedures for charging and of admission of patients. Uniform accounting systems among hospitals will greatly aid both the hospitals and the public authorities.

The determination of eligibility for care at public expense should, of course, be the responsibility of the governmental agency that authorizes the expenditure. Persons already maintained at public expense ought to be eligible without further ado. For others there should be investigation and consideration by qualified persons, all the medical and social factors that bear on the individual's ability to pay being taken into account.

As a minimum standard, the committee believes that all hospitals participating in the program for the care of the indigent should conform to some accepted standards of service, such as those required for approval by the American College of Surgeons. Where there are sufficient facilities, still higher standards may be set by local action. If there are not enough beds in approved hospitals, the public authorities and the approved hospitals may agree jointly on the use of unapproved hospitals, provided the latter agree to conform to certain standards of service and to submit to inspection. When there are no approved hospitals, local officials should consult with state or regional authorities who are familiar with hospital standards of organization. To deal realistically with methods of best utilizing government funds in existing hospitals, as this report helps us to do, seems at least as important as to argue about "government interference" or the dangers of politics.

Analyzing the Hospital's Job

G. HARVEY AGNEW, M.D.

TOO many of our hospitals are content with performing the job laid at their doorstep, performing such tasks conscientiously and well but forgetting or ignoring the greater responsibility lying just beyond the hospital gate.

A functional job analysis is needed. This should be done in every community, large or small. This functional analysis, or inventory, should yield a clear and comprehensive summary of the health needs of the community and should reveal to what extent the hospital facilities are meeting the actual needs of the people. By checking off the questions regarding community needs given in the adjoining columns, a hospital can rate itself in terms of community service.

Many hospital administrators think, quite rightly, that it is not necessarily the responsibility of their particular hospitals to meet all community needs. There are undoubtedly definite limitations to what the individual hospital can do. But it is the moral responsibility of the hospital field as a whole in any area to endeavor jointly to meet as fully as possible all of these community needs and to do this with the minimum of overlapping and unnecessary expense.

The trouble in most communities or districts is that there is no coordinated planning. Each hospital runs its own show and its relationship to its neighbors is largely that of friendly competition and rivalry.

Each hospital chooses and caters to its own clientele. That is perfectly legitimate and natural, but the result is that there is a plethora of hospitals catering to the most interesting group of patients, *i.e.* those with acute diseases. Patients with chronic, incurable, alcoholic or communicable diseases and epileptic patients are not sought by voluntary groups and, unless the state provides the service, as it does for mental patients, they are usually forgotten.

There is some tendency, too, to duplicate facilities in the field of acute diseases. This is a natural result of a competitive situation. If one hospital gets a deep therapy machine or an "iron lung," the others

Doctor Agnew is president of the American Hospital Association and secretary-treasurer of the Canadian Hospital Council.

How Does Your Community Rate?

QUESTIONS	Yes	No
1. Are there enough beds for acute diseases?	☐	☐
2. Is there about the right number of private rooms and not a surplus?	☐	☐
3. Are moderately priced accommodations sufficient?	☐	☐
4. Are the poor adequately provided for?	☐	☐
5. Are communicable disease cases adequately housed?	☐	☐
6. Is there adequate provision for the incurable?	☐	☐
7. Are convalescents properly cared for?	☐	☐
8. Are there enough beds for the chronically ill?	☐	☐
9. Do facilities exist for proper diagnosis and care of the mild psychopathic and early mental disease patients?	☐	☐
10. Is there a psychopathic ward in one of the acute disease hospitals (or must the irrational patient [say] with undiagnosed uremic poisoning be committed to a hospital for mental diseases)?	☐	☐
11. Is the narcotic addict accepted or must he be sentenced to jail to receive treatment?	☐	☐
12. Is hospital care given to alcoholics?	☐	☐
13. Is there full cooperation between hospital and public health authorities?	☐	☐
14. Is there sufficient follow-up service on former ward patients or out-patients to minimize relapse from neglect?	☐	☐
15. Are efforts being made to develop a hospital care insurance plan to lessen the financial burden of sickness upon the individual?	☐	☐
16. Are diagnostic facilities in the community adequate?	☐	☐
17. Do the hospitals of the town or district cooperate in supplying a good pathologist or biochemist?	☐	☐
18. Are the hospitals giving leadership in preventive medicine?	☐	☐
19. Are the nurses being graduated given the type of training that will enable them to meet the outside nursing needs of the community?	☐	☐
20. Are nurses given adequate instruction in: (a) psychopathic nursing; (b) pediatric nursing; (c) public health work?	☐	☐
21. Do the hospitals have a room for premature infants?	☐	☐
22. Is there an incubator ambulance available?	☐	☐
23. Is there a ready list of blood donors?	☐	☐
24. Is there a dental clinic connected with any of the hospitals?	☐	☐

must follow suit. In a community in which there are several hospitals, would it not be better to let one hospital specialize in respiratory infections, for example, and let the others develop an outstanding metabolic department, a pediatric service, a psychiatric division or a dental clinic?

One of our most pressing needs at the moment is a solution to this situation. Individually, our hospitals are wonderfully efficient. We can be intensely proud of our thousands of hospitals and of the conscientious way in which they are caring for the patients brought to them, but they must do more. There must be a closer link with public health, with social services, with community nursing and with health education. By making the hospital the health center of the community much can be done to improve the community health. If this has not been fully developed in the past, the hospitals should not be blamed. Hospital workers can take on these added responsibilities only insofar as they can get support from the people and encouragement to do this work. In many communities the hospital is the headquarters of the public health nurse; it staffs the local isolation unit when necessary; it gives its pupil nurses field training in public health and, perhaps, in obstetrics; it furnishes sterile goods for home confinements, and it houses the county medical society library.

Some smaller hospitals have a joint or traveling radiologist, pathologist or dietitian. The dietitian of a larger hospital may supervise the dietary arrangements of the smaller hospitals. In a larger center there may be a diet dispensary or a food clinic for the benefit of the poor. Dietary classes are almost essential if one expects to get good results after certain types of patients leave.

Few except the largest hospitals operate convalescent homes; why could not all of the acute hospitals in a given area support one properly equipped and staffed convalescent hospital?

Local hospital councils or regional associations in rural areas stimulate cooperation.

Naturally, the monetary factor cannot be overlooked. Certain classes of patients are not sought because they are nonremunerative and do not have sufficient appeal to attract adequate voluntary funds. The poor can be cared for only when revenue from other sources will permit. Moreover, philanthropy is a voluntary matter and would be alienated in part were hospital activities too rigidly directed by outside authority, for instance, the government.

These factors must ever be kept in mind. Despite their limiting influence, however, there are almost endless opportunities by which our hospitals, with some planning and cooperation, can more fully meet the varied needs of their respective communities.

It seems entirely reasonable to anticipate that much of the associated expense of this increased activity will be offset by the economies that can be effected by greater cooperation and reduction of duplication.

Bedside Teaching

MABEL McVICKER, R.N.

SINCE the publication of the revised Curriculum Guide for Schools of Nursing, we critically analyzed our educational program at Waterbury Hospital, Waterbury, Conn. One result of this analysis has been the addition of 60 hours of instruction during the past school year.

We are not concerned with the mere addition of teaching hours to our educational program but we are vitally concerned with a critical evaluation of our present teaching methods to the end that our patients receive increasingly better care and that student nurses be increasingly better prepared to give competent nursing service and fitted to aid in the prevention of disease.

The strengthening of ward teaching through a planned program requires the cooperation of doctors, supervisors, head nurses, instructors and the students themselves. The dietitian and pathologist or laboratory technician may also assist. We have had this cooperation to an encouraging degree.

Of the 60 additional teaching hours already referred to, approximately one half have been devoted to ward teaching. This ward teaching program may be divided into the following parts: (1) the morning conference, (2) bedside clinics, (3) clinics not held at the bedside, (4) individual and group demonstrations.

A brief outline of the bedside clinic follows:

Time: 6:30 to 7 p.m.

Number of Clinics: At least one, weekly, for each student.

Conducted by: Resident, doctor, intern, supervisor or head nurse: usually, both doctor and graduate nurse, assisted by at least one student nurse.

Place: At bedside of patient, if possible. Very ill or private patients often cannot be shown to a group but they may be good clinic cases.

Types of Cases Shown: Those most typical of the disease to be discussed.

Since early application helps to fix learning, the clinic is best given in connection with the class presentation of the disease or condition. The nursing treatments and procedures have been demonstrated at this time.

Obviously, many difficulties are encountered in this method of teaching. For example, (1) all students cannot see the same types of cases directly in connection with the class presentation of the disease, since large groups are contraindicated both from the patient's and the nursing viewpoint; (2) the ever present "time element" must be considered; (3) the case may not be a "typical" one, and (4) the disease under discussion may be a rare or seasonal one. Obviously, too, bedside nursing care is learned at the bedside. This learning is most effective when accompanied by a planned program in which the student herself participates, under adequate supervision.

The utilization of all available opportunities for such bedside teaching inevitably results in more intelligent care to the patient and in better preparation for the student nurse.

Miss McVicker is director of nursing service at Waterbury Hospital, Waterbury, Conn.

The establishment in Johns Hopkins Hospital of a branch of one of Baltimore's large banking houses has been an unqualified success from the point of view of the hospital and the bank.

The Bank at Johns Hopkins

JOHN E. RANSOM

IN 1930 the Fidelity Trust Company of Baltimore established a branch bank in the Johns Hopkins Hospital. During the fifty years since the Johns Hopkins Hospital was opened a rather close relationship has existed between the hospital and the Fidelity Trust Company. The president of the board of trustees of the hospital, who has filled that position for more than thirty years, is legal counsel for the trust company. Other members of the hospital board are or have been members of the directorate of the bank. The downtown office of the hospital is located in the Fidelity Building and the bank has been the depository of the hospital's funds from an early date.

However, the establishment of this branch was an innovation on the part of both institutions. The Fidelity Trust Company has no other branch; the Johns Hopkins Hospital houses no other commercial enterprise.

In conversations between the director of the hospital and directors of the bank, the fact was brought out that to have a branch of some bank housed in the hospital would be a convenience to its staff and personnel, particularly because of the fact that there is no bank in the immediate vicinity of the institution.

A number of physicians on the staff of the hospital were depositors of the Fidelity Trust Company. To serve them more conveniently was the primary motive of the bank in deciding to establish the branch. Of course, it was thought that such a branch would attract some new accounts and that its presence in the hospital would have some publicity value. Consequently an arrangement was entered into under which the Fidelity Trust Company operates a branch at the hospital and the hospital provides space in its administration building, heat and light.

This enterprise has been a success from the start. The bank not only serves the physicians who were its old customers but through this branch has attracted a fair amount of new business. At the time this article is written, 825 savings accounts and 805 checking accounts are carried at the branch bank. These numbers do not include any accounts in existence prior to the opening of the branch.

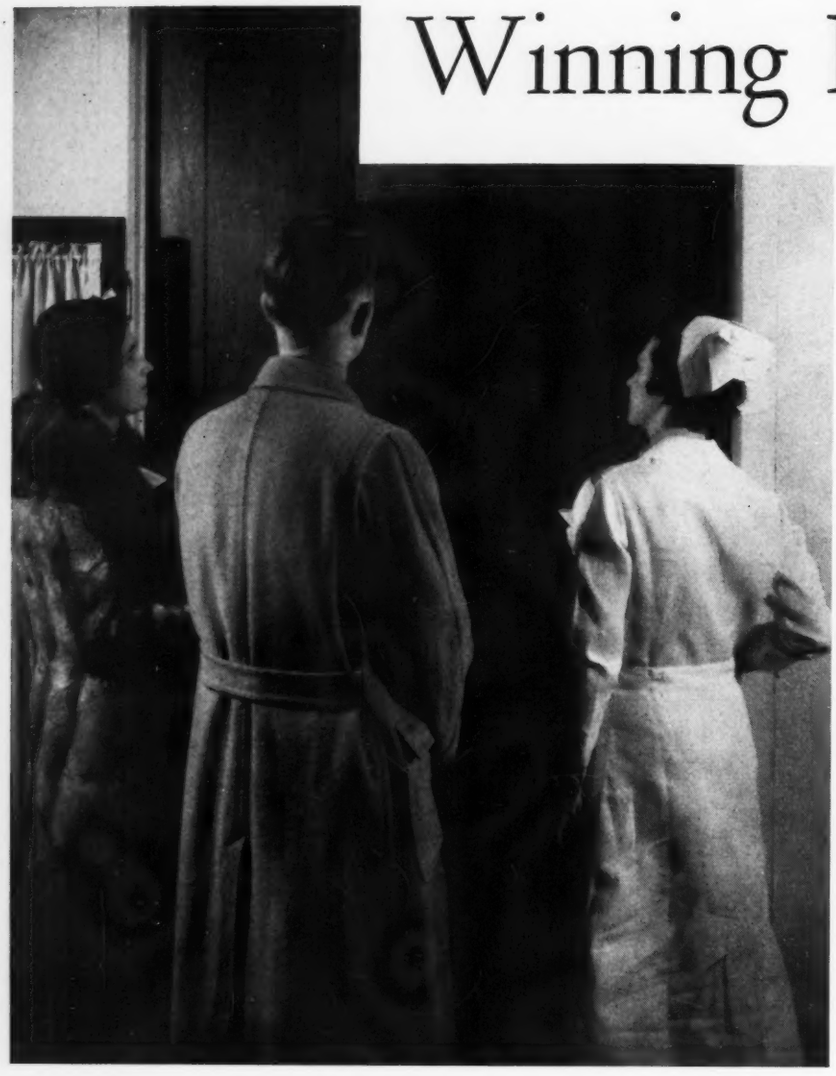
This branch performs for its patrons all the functions of the parent institution with the exception of providing safe deposit boxes. It receives deposits, provides for withdrawals on both checking and savings accounts, cashes checks and arranges for loans and collections; it acts as an agent through which securities may be bought and sold, though as a trust company the Fidelity does not itself buy or sell stocks and bonds. It handles the payroll of the medical school of the Johns Hopkins University. Because of the fact that there are many foreign students in the Johns Hopkins School of Hygiene and Public Health, which is located adjacent to the hospital, the bank does a considerable business in handling remittances to and from foreign countries.

The Hopkins branch is not an experiment. It has demonstrated its value and usefulness, on the one hand, to the bank of which it is a part and, on the other, to the employes and staff of the hospital, and the faculty and students of the medical school, who are most enthusiastic about this service.

Mr. Ransom is assistant director of Johns Hopkins Hospital, Baltimore.

Winning Funds and

A. J. SWANSON



Two prospective donors to the Abington Hospital, Abington, Pa., study the plate that bears the names of those who endow rooms in the hospital.

A PROPERLY planned fund-raising program is a special technic in public relations. Fund raising should be considered as only a phase. It should be planned and conducted in such a manner as to be a logical part of a longer and more inclusive program of general public relations. Effective fund raising should be preceded, accompanied and followed by other activities.

To describe the position of fund raising in a public relations program, it seems necessary to describe the other parts of the program, at least briefly. Let us look quickly at certain factors and activities that precede the fund-raising phase:

The Proposition: A basic factor is that the hospital shall be a good one that performs a necessary function.

Routine and Policies: It must have an effective and pleasing technic in its contacts with patients, visitors, employes, staff members and the public. Many an excellent hospital according to professional standards needs to have its technic streamlined so far as public relations is concerned. The following are several of the points on which the hospital should be examined: (1) telephone switchboard service; (2) admitting desk routine; (3) cooperation with newspapers; (4) receptionist and information service; (5) signs, directories and information folders, and (6) relations with staff members, women's association, nurse alumnae and employes.

The necessity for the fund-raising phase in the public relations program should be based upon a thoroughly sound plan for the development of the hospital. Whether this plan calls for enlargement, replacement, modernization or merely the liquidation of capital debt, it should be definitely worked out in relation to the hospital's future and the future requirements of the community.

Long before the fund-raising phase of a public relations program, a program of public education should be begun on an ideal basis. This may include the use of direct mail, newspaper articles, radio broadcasts and public speaking. It should, of course, be of a purely institutional character and should include no appeal for funds. Its purpose is to clarify the hospital's position in relation to the community, to establish the public's responsibility to the hospital and to stimulate the public's interest in health and hospital matters in general. The exact nature of such a program is determined by objectives established for the fund-raising phase. In a limited campaign, direct mail may be more emphasized than it would be in a general public campaign.

Our experience in the fund-raising program at present under way in connection with the Toronto Western Hospital has shown that a policy of public education for a considerable period prior to the actual solicitation of funds has been valuable. In all our announcements, which were carefully prepared, we stressed the needs of the hospital and the place it holds in the community and what it means to the citizens as a whole as one of a group of like institutions.

We, of course, started off with the usual dinner following the enlistment of a citizens' committee to sponsor our program. At this dinner the speeches stressed the needs of the

From a paper read at the Tri-State Hospital Assembly, Chicago, May 1939.

Influencing People

General Superintendent
Toronto Western Hospital

A departing patient says good-by to her doctor and nurse at Salem Hospital, Salem, Mass. Maybe she will grow up to be a member of the board.

hospital and, in addition, the chief of one of the major services gave a short conversational talk on the benefit of the hospital to the community and to the medical profession. He emphasized the advances that were being made daily in the treatment of disease and the spectacular results that were being obtained with the newer discoveries that are piling one on the other in the field of medicine. This was such a popular feature that it has been continued at each of our report meetings. A member of the staff of each of the departments describes the particular work of that department.

Each week we have run an illustrated article in a prominent position in one of our largest newspapers; this article describes in detail certain phases of the work of the hospital. We have been particular to make it clear that all hospitals in the community are doing similar work in their respective locations. In addition to the interesting stories of the work of the hospital, many of the contentious points that the public is so prone to bring up can be covered in the carefully prepared publicity, both newspaper and direct mail. These include such questions as: (1) how are voluntary hospitals financed; (2) where does all the money come from to build and equip these expensive buildings; (3) why are rates for accommodation so high when nurses and interns are not paid; (4) is the medical staff paid?

Only after the long preparation indicated does the sound public relations program reach the fund-raising stage. The beginning of this is signalized by the enlistment of volunteer workers. The quality and enthusiasm of these workers will depend largely upon the soundness of the proposition, the plausibility of the plan and the effectiveness of the educational technic that has gone before, and these factors will also affect the result when subscriptions to the hospital fund are actually sought.

Volunteer workers must be educated and especially instructed if they are to be effective in their solicitation of contributions. This requires considerable experience, tact and patience. The results of solicitation will be in direct ratio to the skill and effort expended and there is the further continuing benefit that after they have completed their fund-raising efforts, these volunteers retain their knowledge of the hospital and its problems and serve as advocates of the hospital throughout the community. It will be found that an interesting point develops in regard to the workers. A number of them will want to become more familiar with the hospital before they actually go out to solicit funds. They will visit it, paying particular attention to those departments in which they are interested and on many occasions will want to bring prospective subscribers to look over the plant. This is an excellent attitude from the public relations standpoint. It makes more and more people familiar from first-hand contact with the work that is being done in the hospital, the type of service that is being given and how the institution is being administered. From time to time it is good to get a number of people together, serve luncheon and take them through the hospital as a group.

The technic of fund raising is too broad and technical a subject for treatment in this article, but the fol-

lowing items are mentioned because of their importance:

1. Interpretation of the need for funds must be factual and able to withstand searching and critical scrutiny.
2. A memorial plan of subscriptions, if artfully presented, is most effective.
3. Leadership in terms of actual activity on the part of board members and leaders of the volunteer workers is indispensable if maximum results are to be obtained.

During the fund-raising campaign, public education and publicity naturally are continued; indeed, the tempo is accelerated.

Those who think of fund raising as a self-contained, isolated and complete program hold a classical view probably derived from the old-fashoned short-term "drive." When understood as a phase of public relations, it is more readily apparent that fund raising should not be a terminus of the broader and more inclusive program. It is an unfortunate fact that many or most hospitals, after having obtained subscriptions amounting to a substantial sum, lose interest in public education and in the preservation and enhancement of public good will and other matters recognized now as being under the broad classification of public relations.

Favorable and constructive publicity is desirable after a fund-raising program because it improves the collection of payments of pledges. Virtually all large capital funds are subscribed on a deferred payment basis and the influence of good public relations during the period of payment is obvious.

Continuation of public relations after the campaign is also desirable. Ideally, a public relations program should be continuous and serve the following objects: (1) stimulation of bequests; (2) development of a group of annual subscribers to the maintenance fund of the hospital; (3) stimulation of utilization of the hospital, especially income producing facilities, and (4) conservation of the interest of the public generally, including subscribers.

A properly developed fund-raising plan will create interest in an institution in the minds of individuals where none existed before. It seems logical that if a person of wealth can be sufficiently interested to donate several thousand dollars to establish a ward, operating room or laboratory, his interest can be maintained by proper cultivation by means of hospital visits, receipt of interesting hospital literature and invitations to special functions. This is only one instance of the tremendous benefits that may accrue to an institution as a direct result of the fund-raising phase of a properly planned public relations program.

Fund raising should be thought of as a phase of a general long-term public relations program because under such a principle the maximum results can be obtained.

The Broken Hypodermic Needle

JACOB PRAGER, M.D.

THE possibility that a hypodermic needle may break during a procedure is not often considered when the needle is prepared for use. While it is true that this sort of accident may not occur frequently, it seems to have a predilection for occurring at a crucial moment, *i.e.* during a lumbar puncture on a patient suffering with meningitis or in the act of giving a hypodermoclysis to a patient who is just beginning to react following an operation.

Last year the causes of needle breakage during lumbar punctures and hypodermoclyses were carefully studied at the Jewish Hospital, Brooklyn, N. Y. Fortunately, in each case the broken piece was removed without untoward results to the patient. A careful examination of these needles revealed that there were varying degrees of corrosion of the metal, at times almost imperceptible, on the inside of the cannula at the point of breakage. Since all of the needles were supposedly of the rustless type a series of investigations was made to determine the cause of this sort of needle failure.

It was found in each instance that the broken needle was of the high carbon steel type. The method of manufacture was such that the outside of the cannula was plated with rust-resisting nickel while the inside remained untreated with this protective coating.

The manufacturers declare that the inside of these needles must be cleaned and dried and protected with an oiled stylet or they will rust and break at the point of oxidation. We discovered also that saline solutions passed through high carbon steel needles increase the rate of oxidation on the inside of the cannula.

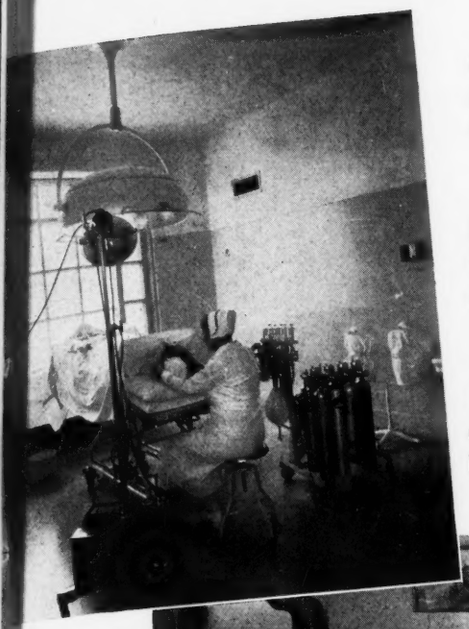
The needles recovered after the accidents were comparatively new. The methods for their cleaning, washing, drying and oiling had been carried out to conform with the recommendations of the manufacturers. It was, therefore, felt that high carbon steel needles were not suitable for general use inasmuch as their condition was not sufficiently stable at all times to be absolutely safe.

In looking about for a needle the structure of which was sufficiently different to eliminate or reduce the hazards of breakage, we sought the advice of the manufacturers who suggested a change to the stainless or rustless steel type of needle. These needles are more flexible than carbon steel needles and have unusual resistance to breakage. Being rustless throughout they require less care and are not affected by solutions containing iodine or salts. They are also resistant to most acids.

An immediate change to stainless steel needles was made for those procedures in which the stresses and strains are the greatest, as is the case with lumbar punctures, local anesthesia and hypodermoclyses.

Since the adoption of this change several months ago there have been no needle failures and the results lead us to believe that the danger of needles breaking during procedures has in this way been reduced to a minimum.

Doctor Prager is assistant administrator of the Jewish Hospital, Brooklyn, N. Y.

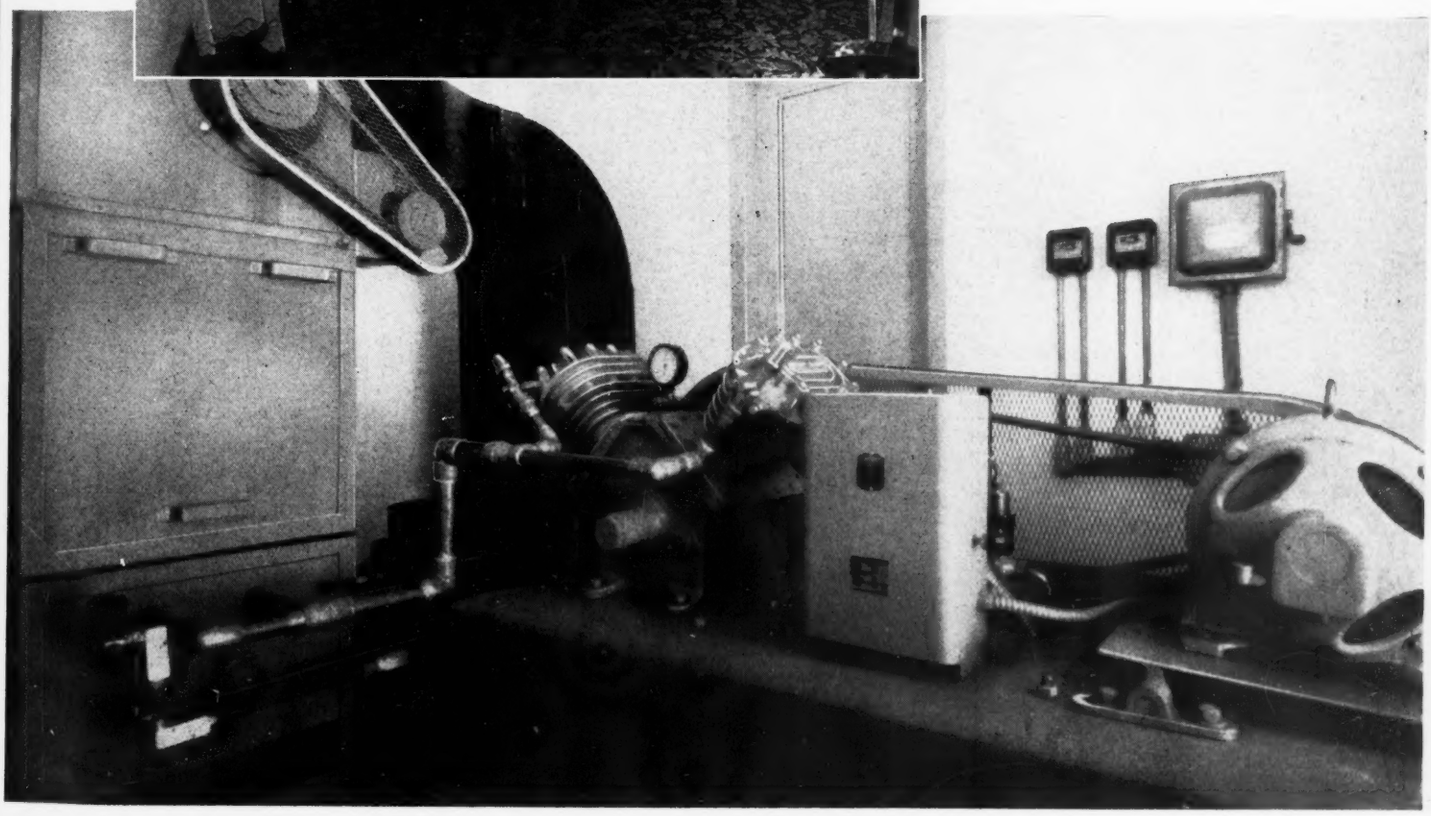


LEFT: Reports from physicians on the effect on patients of air conditioned operating rooms are uniformly favorable.

RIGHT: Nurseries for premature infants require air conditioning; those for normal infants are often so equipped.

BELOW: The air conditioning unit for individual rooms has increased occupancy 10 per cent.

BELOW: Condensing unit and air conditioning unit at Havana Police Hospital, Havana, Cuba. It costs more to install and to operate air conditioning in a hospital than in an office building because of twenty-four hour occupancy and the constant traffic in and out of the rooms.



Portfolio of AIR CONDITIONING

Advantages and Limitations

C. P. YAGLOU

HOSPITAL air conditioning differs considerably from routine applications to commercial and public buildings. Each ward presents different problems; requirements may vary according to individual preferences of physicians. Although complete air conditioning of large hospitals is impractical at the present stage of the art, it is desirable, and often necessary, to provide certain wards with essential equipment for specific needs.

An idea of the relative importance of air conditioning to various wards can be obtained by referring to the partial list of installations in the accompanying table.

Operating Rooms

Artificial humidification and ventilation of operating rooms, in conjunction with proper grounding of equipment and personnel, have contributed much in reducing anesthesia explosions by static sparks but cannot and have not materially affected risks from numerous other causes. Even the heat of a surgical lamp may ignite ether-oxygen mixtures, which have the lowest ignition temperature of the common anesthetic mixtures.[1]

Explosions in the last few years have resulted chiefly from the use of electrocautery or surgical diathermy, but the danger of such explosions is believed to be small compared with the benefit attained from reduced postoperative complications. The use of such electrosurgical apparatus precludes grounding, and sometimes artificial humidification also, because of the danger of electrocuting a grounded patient. Until a good anesthetic is found that is not explosive, the danger will remain, especially in operations requiring the use of sparking equipment on parts of the body near the throat.

Cooling of operating rooms during summer heat waves has improved the comfort and the energy of the operating staff and is believed to have contributed much to the welfare of the patient directly or indirectly. There is much good evidence to show that heat stroke and heat exhaustion in hot weather are common postoperative occurrences sometimes overlooked and treated as shock. There are not enough clinical data to evaluate the effects of air conditioning on surgical patients. Reports from surgeons are uniformly favorable and give no support to fears of ill effects on patients from operating room temperatures from 10 to 15 degrees lower than outside temperatures in warm weather or to the anticipated increase of wound infections from increased circulation of air.

On the other hand, there appears to be a slight, but definite increase of colds among nurses from frequent exposure to sudden temperature changes. This experience is confirmed by nurses attending premature infants in warm and humid rooms during the cold season of the year.

A wide difference of opinion exists as to the most suitable operating room conditions. The surgical staff likes to work best in temperatures between 70° and 78°F. but, for the sake of the patient, the temperature is often increased to 80°F. The relative humidity is usually kept at between 50 per cent and 60 per cent in order to prevent accumulation of static charges. Some recent studies[2] seem to indicate that the patient loses little heat under modern operating conditions and that the room temperature should be low, rather than high, in many instances. There is great need for a thorough study of this important matter.

Although cooling of recovery rooms is held to be at least as important as cooling of operating rooms, statistics show only one cooled recovery room for every seven operating rooms. In many instances, private rooms that are cooled are used as recovery rooms in warm weather without being classified as such.

Sterilization of air of operating rooms is still in the experimental stage, although it is being used with apparent success in a few hospitals. The old-fashioned gauze mask gives a false security in an otherwise aseptic technic. The problem continues to be the prevention of air contamination rather than the sterilization of contaminated air.

Nurseries and Maternity Wards

The necessity of maintaining an even and relatively high air temperature in the care of premature infants accounts for the wide use of individual incubators, but recent studies at the Boston Infants Hospital[3] show how important humidity, ventilation and cooling in hot weather can be in saving lives. A continuously high humidity of about 65 per cent proved to be the most desirable, especially for infants weighing less than 3 pounds. No appreciable benefit resulted to infants weighing more than 4 pounds, except in special cases.

In nurseries for normal infants, there seems to be little need for year round air conditioning, although some provision should be made for ventilation and cooling excessively warm rooms.

In maternity hospitals that are not completely cooled, there is a danger in lowering the nursery temperature much below the prevailing ward temperature, owing to sudden temperature contrasts in moving infants from the nursery to their mothers.

From the standpoint of comfort,

[1]Jones, G. W.: Explosion and Fire Hazards of Combustible Anesthetics, Rep. of Investig. No. 3443, U. S. Bureau of Mines, April 1939.

[2]Smith, F. W. G.: Investigations in the Relationship of Heat Regulations to Late Ether Convulsions and Syndromes, Anesth. & Analg. **17:** 169, 1938.

[3]Blackfan, K. D.; Yaglou, C. P., and McKenzie, K.: The Premature Infant: A Study of the Effects of Atmospheric Conditions on Growth and on Development, Am. J. Dis. Child. **46:** 1175, 1933.

# of Hospital Air Conditioning

Director, Department of Industrial Hygiene
Harvard School of Public Health

excellent results are reported in the cooling of labor and delivery rooms, particularly from the warmer sections of the continent. Some hospitals in the North provide for humidification of delivery rooms in cold weather, although the danger from anesthesia explosions is more remote in these rooms.

Fever Therapy Cabinets

The chief value of air conditioning in fever therapy lies in its ability to prevent loss of body heat by radiation, convection and evaporation through the medium of nearly saturated air at a temperature that is but a few degrees above that of the body. If heat loss is not prevented, an extra strain is imposed on the patient because of the extra heat that must be applied to the body to counteract the loss. This may be an important factor in dehydration and shock in patients undergoing fever therapy.

It has long been known that although hot, dry air may have the same effect on rectal temperature as saturated air at some considerably lower temperature, the loss of fluid and chloride under the former condition would be greater. According to recent studies by Gibson, Kopp, and Pijoan[4] not only dehydration but the degree of alkalosis are more nearly at a minimum when fever (106°F) is induced with warm saturated air (106° to 112°F with 95 to 100 per cent relative humidity) than when it is induced with hot dry air (140°F, 40 to 50 per cent relative humidity), despite the liberal administration of fluids. Treatment was uneventful under the former condition, whereas shock occurred under the latter.

In an excellent evaluation of relative advantages and disadvantages of various methods for producing systemic fever, Neymann[5] arrives at the conclusion that the method of choice is a combination of electromagnetic induction and air conditioning, the former for raising the body temperature to the desired level and the latter for maintaining the fever by preventing heat loss.

Nearly fifty diseases have been treated with fever produced by various physical means. Definitely favorable results have been reported in gonorrhea, neurosyphilis, chorea, asthma, peripheral vascular diseases and others. Diseases the organisms of which cannot be killed by heat within the safe limit of human tolerance have benefited by vasodilatation and increased immunologic response.

Incomplete Statistics of Hospital Air Conditioning in United States
(Including Winter or Summer Air Conditioning or Both)

Conditioned Room or Ward	*No. Hosps.*	*No. Rooms*
Completely conditioned hospital buildings	12	375±
Operating and postoperative rooms	73	179
Private rooms or wards	29	249
Labor and delivery rooms	27	54
Nurseries for premature infants	25	38
Nurseries for full-term infants	19	79
Experimental rooms and laboratories	16	50
Anesthesia rooms	13	18
Allergy rooms	9	10
X-ray and physical therapy rooms	8	9
Oxygen chambers	7	9
Isolation wards	3	3
Miscellaneous (offices, examination rooms, nurses' rooms, dining rooms, etc.)	12	190

Allergic Disorders

Hay fever and pollen asthma offer a wide field of application of air conditioning in hospitals, offices or homes. Although removal of airborne pollens is the chief factor in the relief of allergic symptoms, comfortable temperature and humidity are definitely beneficial. Extremes of heat or cold, humidity or drafts must be avoided because they are likely to initiate or aggravate symptoms.

Unlike medical desensitization, treatment by conditioned air is not curative but gives relief in extrinsic forms of allergy only so long as patients remain in a pollen free atmosphere. The symptoms return on exposure to pollen laden air. Intrinsic forms of allergy and bacterial asthma are not appreciably benefited and may even be adversely affected by overcooling the air. To a hospital or clinic, a properly conditioned room offers a valuable aid in the diagnosis and treatment of complex cases, since failure to obtain relief in such a room excludes extrinsic causes.

Other Applications

In oxygen therapy, the use of air conditioning is now almost entirely confined to cooling and dehydration of oxygen tents by means of ice. Excessive CO_2 is adsorbed by soda lime. Aside from experimental purposes, oxygen chambers of massive metal construction have proved impractical, owing to high initial and operating costs.

In x-ray and physical therapy rooms, ventilation and cooling are desirable to remove excessive heat and ozone for the comfort of patients and doctors. Large storerooms for x-ray plates and films also require conditioning to prevent deterioration of pictures and new films.

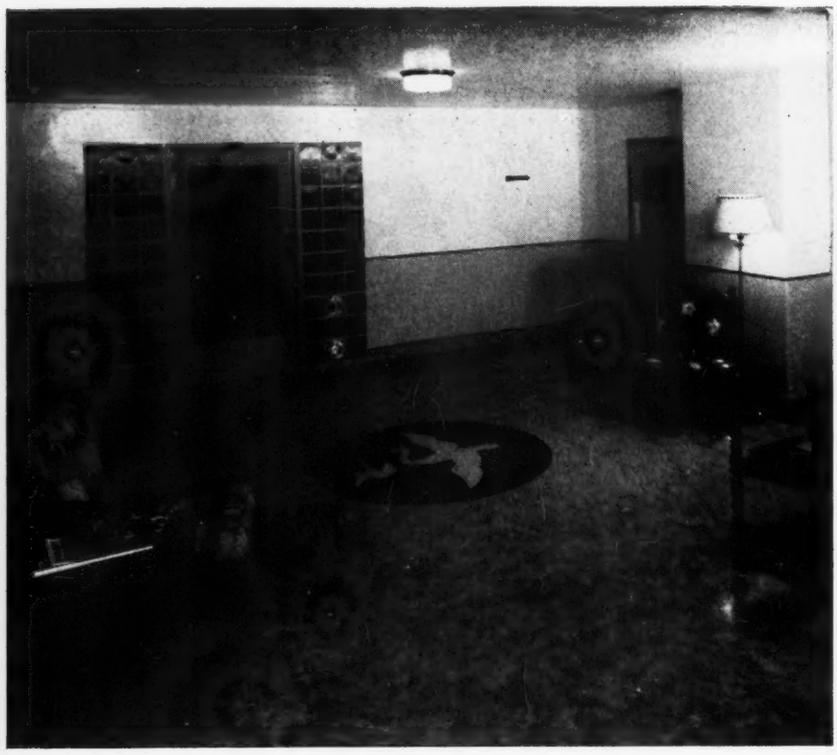
Surprising as it may seem, isolation wards are rarely air conditioned and only a few have any formal system of mechanical ventilation, probably because of fear of spreading infection from one room to another.

Studies in air conditioning as an adjunct to the treatment of respiratory infections, arthritis, cardiovascular disorders, summer diarrheas, fevers, vertigo and a few other diseases have been in progress for some time in certain hospitals and medical research institutions. Although the field appears to be broad, it is yet too new to permit a critical evaluation of results.

[4]Pijoan, M.: Certain Biologic Effects During Artificial Fever, Arch. Phys. Therapy **20:** 170, 1939.

[5]Neymann, C. A.: Artificial Fever Therapy, Baltimore and Springfield, Ill., Charles C. Thomas.

Right: Second floor lobby of the air conditioned Sutter Hospital. Below: A private room.



Air Conditioning

R. D. BRISBANE

THE Sutter Maternity Hospital in Sacramento, Calif., was opened a year ago last November. Because it is air conditioned throughout, our experience of the first twelve months may be of interest to others who are planning such an improvement.

This branch was erected in a suburban section 2 miles from the Sutter General Hospital for the purpose of obtaining complete separation of this service from other types of illness. Because unit technic is used in the care of infants who are washed and treated on their own individual combination bassinets and tables, with one nurse caring for three mothers and three babes, no trouble has been experienced with cross-infections in more than ten years. Nevertheless, the parents feel happier about separate accommodations in which other illness is not present, as evidenced by a 20 per cent increase in patronage over the previous year when the department was situated on a floor of the general hospital.

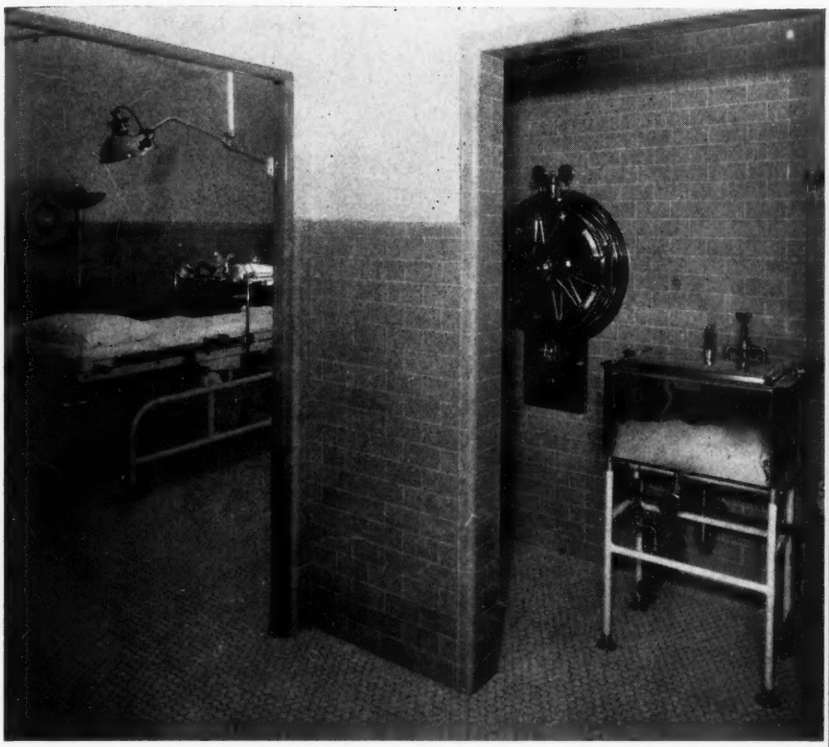
The new building is of block "Y" design of reenforced concrete, two stories high, with the walls and roof fully insulated with 3 inches of rock wool. The delivery rooms and service departments are located in the stem of the "Y" and all guest rooms are on the front of the building.

Sacramento's mean temperatures are 72.2° F. in summer and 47.5° F. in winter, ranging between 30° F. in winter and 110° F. in summer. Heating is needed from approximately September 15 to May 15 and cooling, the rest of the year.

The air conditioning plant, selected after careful review of five bids from the largest companies in the field, provides for one system without recirculation of air for the delivery room suite (comprised of eight nurseries of six or seven bassinets each and four isolation nurseries of one crib each), and another complete system, using 50 per cent recirculation, for the rooms and other portions of the building.

These two systems operate from central units in the basement with ducts leading to respective outlets. Hand controlled grilles in the sidewalls and louvers in the doors can be closed for each room if outside air is preferred by individual guests. Central control of this type we consider preferable to the individual room units. The temperature in the nurseries is kept at from 75° to 80° F. and in adults' rooms, at from 70° to 80° according to outside temperature, as it is believed dangerous to have inside summer temperature more than fifteen or twenty degrees lower than outside air.

All cooling of the air is accomplished by the hospital's own well water that maintains a temperature of 62° F. throughout the summer. Auxiliary refrigeration is available for heavy loads through a 10 h. p. compressor, but this was operated only a short time on two evenings when the outside heat penetrated the walls. Humidity control is automatic for



Left: The sterilizer serves the delivery room shown and also a surgery. Below: First floor lobby.

in 52 Bed Hospital

Superintendent, Sutter General and Sutter Maternity Hospitals, Sacramento, Calif.

both systems, with proper filtration of all incoming air.

By use of gas with automatic controls to produce low pressure steam for heating coils in the units for hot water, the whole system functions automatically throughout the year with no attention except for oiling the motors, one change of filters and replacing loss of water in the boiler.

The average cost of heating the entire building of 15,000 square feet of floor area, including heating all the hot water used in building from a 1000 gallon tank, with gas averaging 3 cents per hundred cubic feet, was $79 per month. Full insulation of the entire building with rock wool undoubtedly was responsible for this fine record. Temperatures from October to March ranged from 30° to 65° F.

The total 220 volt power for a 10 h. p. pump, automatic elevator and other motors, at 2½ cents per kilowatt, amounted to $68 per month.

The total 110 volt lighting cost, including a large neon sign, two floodlights and small motors, averaged $95 per month.

The total cost for all power, heat, light and water was 28 cents per guest day.

It is not our policy to replace labor with automatic machinery but in this case it was impossible to employ a full-time engineer because of competitive maternity rates. The result has been most satisfactory and has produced a maximum of comfort and utility with the absolute minimum of expense for labor.

One of the most important features of the installation is that the fresh air entering the ducts is filtered and washed and, in consequence, at least half the expense of renovating rooms and furnishings has been saved. Because dust from the radiators in Sutter General Hospital is heated and diffused to draperies and ceilings, rooms have to be painted at least every two years with corresponding cleaning bills throughout. The cleaner atmosphere and cleaner surroundings resulting from filtered air, as well as the saving in automatic equipment, are factors that should not be overlooked.

Another feature that should be mentioned is control of the humidity, especially in the nurseries in which relative humidity is kept at approximately 45 per cent. This has controlled the heat rash that could not otherwise have been prevented.

On the guest room circuit better humidity control seems to have resulted in fewer colds and respiratory infections among employes. Although we have no records of employe illness in the general hospital for comparison because the services are combined in many cases, incidence of illness among the nurses in the air conditioned building has been small. After two or three more years' experience something definite can be determined, but, undoubtedly, the trend in days of illness among personnel is downward.

Physiological Aspects

M. B. FERDERBER, M.D., A. A. ROSENBERG

THE human body is extremely inefficient as an engine for performing external mechanical work and, as a result, the greater part of the energy transformation resulting from metabolism becomes heat which must be dissipated from the body in some form or other. In a representative series of studies of a definite rate of activity, only 11 per cent of the energy shown by metabolism left the body for external work.

Numerous investigators have found that there is a change in total heat production with high and low environmental temperatures. For low environmental temperatures the energy produced in the body is sufficient only to take care of the processes of life, physical and mental activities and normal heat losses. For hotter atmospheric conditions the difference in temperature between the body and air becomes less, and then the maintenance of temperature equilibrium by the controlling of heat dissipation becomes one of the main functions of life.

Body heat loss is directly or indirectly affected by the temperature, humidity and movement of the surrounding air as well as by radiation to or from walls or other objects in "sight" of the body. This loss is differentiated into loss by radiation and convection (sensible heat loss) and loss by evaporation of moisture from the body (latent heat loss).

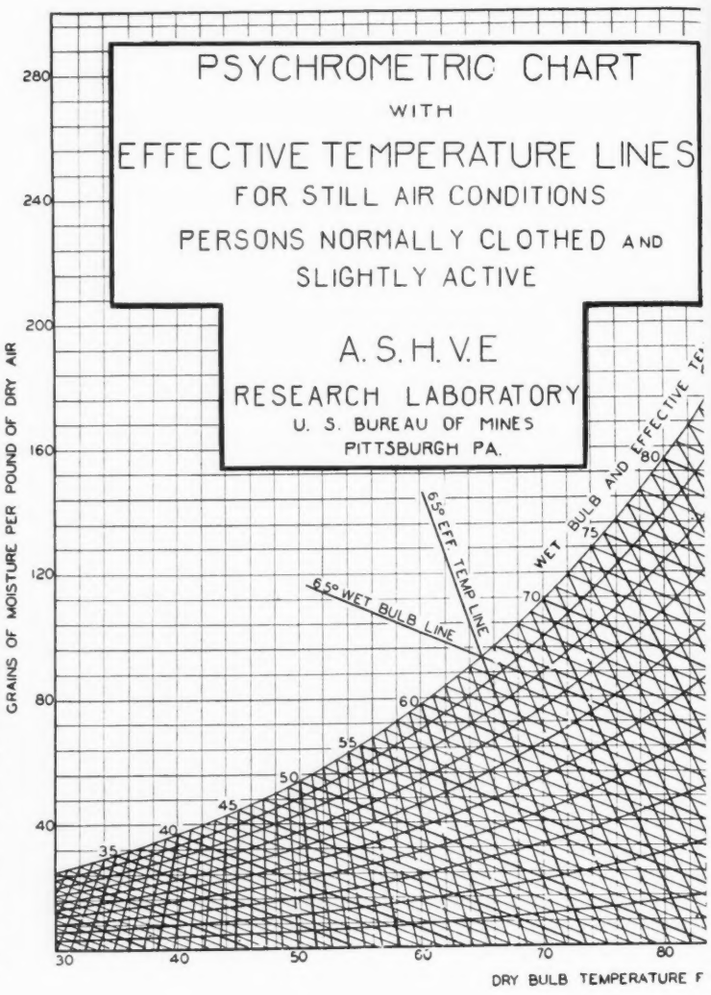


Fig. 1 — Effective temperature lines (E. T.) indicate combinations of temperature and humidity that produce the same total body heat loss and hence the same sensations of comfort or discomfort.

Heat loss by radiation and convection is largely a function of the dry bulb temperature of the air, depending upon the difference between body and air temperatures. As the temperature of the air and surrounding objects rises, the loss of heat by convection and radiation decreases, becoming zero when the temperature of the air and surrounding objects is equal to that of the body. As these temperatures rise above that of the body, heat tends to be transferred from the environment to the body. Moreover, air movment increases this heat exchange by convection.

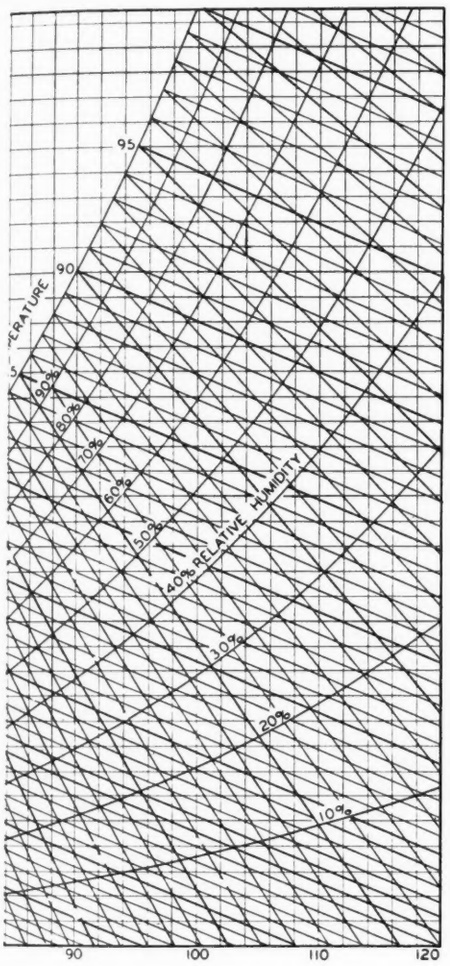
The relative humidity of an air condition depends upon a combination of the dry bulb and wet bulb temperatures. The so-called wet bulb reading does not indicate the temperature of the air but rather that of a wet body when air moves around it sufficiently fast. If the relative humidity of air is increased, the loss of heat by evaporation will be proportionately decreased. While this loss follows purely physical laws of evaporation to a considerable extent, nevertheless, the physiological control of the availability of moisture for evaporation is an important factor.

If, while the dry bulb temperature increases, the wet bulb temperature decreases sufficiently, the decrease in the loss of heat by convection and radiation caused by the increased dry bulb may be counteracted by the increase in the loss of heat by evaporation caused by the lower relative humidity; thus there is no change in the thermal state of the body temperature. From this reasoning it is concluded that there must necessarily be certain combinations of temperatures and humidities that produce the same total body heat loss by the three heat transfer methods and, therefore, the same feeling of com-

Mr. Ferderber is a research fellow in fever therapy, University of Pittsburgh School of Medicine; Mr. Rosenberg is research engineer and Mr. Houghten is director of the research laboratory of the American Society of Heating and Ventilating Engineers.

# of Air Conditioning

and F. C. HOUGHTEN



fort or discomfort. Lines passing through such air conditions may be called equal comfort lines. The research laboratory of the American Society of Heating and Ventilating Engineers has in the last fifteen years carried out investigations to determine these equal comfort lines for various temperatures, humidities and air velocities; these lines are called effective temperature lines.

As an example, figure 1 is a psychrometric chart on which are included effective temperature lines for still air conditions related to persons normally clothed and slightly active. Equal feeling of comfort was experienced by large groups with maintained conditions of 71°F. dry bulb and 90 per cent relative humidity; 74°F. dry bulb and 60 per cent relative humidity, and 77.5°F. dry bulb and 30 per cent relative humidity. The line drawn through these points was designated by the temperature of saturation intersected by the line and is found to be a 70 degree effective temperature line. In like manner the other equal comfort lines on the chart were determined.

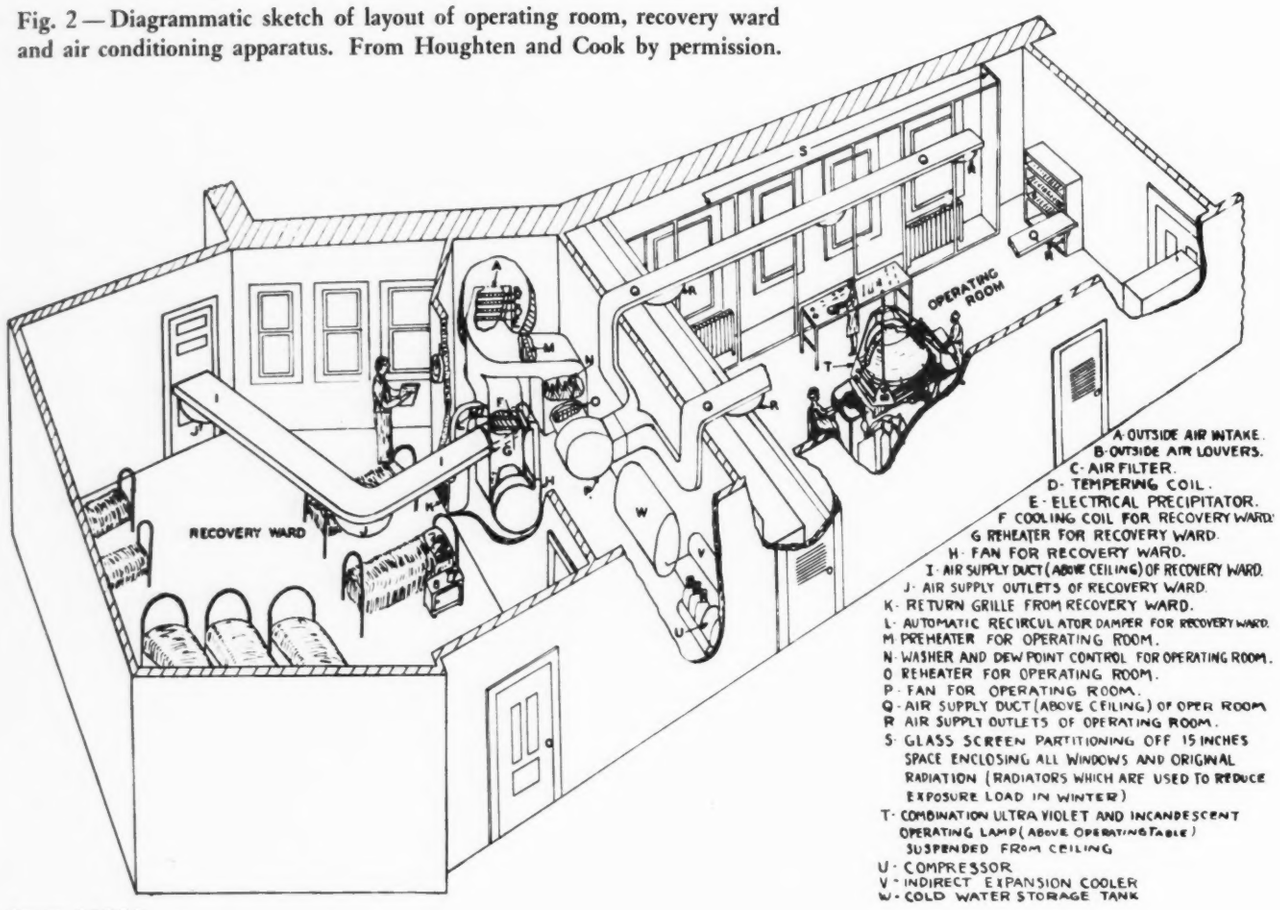
These lines form a series that are not parallel among themselves but approach being parallel to the dry bulb lines at the low temperatures and to the wet bulb lines at the high temperatures. This is as might be expected for at high temperatures one perspires freely so that the skin approaches the condition of a wet bulb; at low temperatures the body is relatively dry and is, therefore, little cooled by evaporation. From the chart it is observed that as the dry bulb temperature decreases, the angle between the equal comfort lines and the dry bulb lines decreases quite rapidly, becoming zero at approximately 46°F. This means, then, that for all points on the 46 degree effective temperature line, feeling of comfort is independent of the wet bulb temperature or the relative humidity. Likewise, by extrapolating the chart to higher temperatures, an effective temperature line would be found that is independent of the dry bulb temperature. Below the 46 degree effective temperature line there is a marked reversal in the direction of these lines, *i.e.* for air conditions represented by points in this part of the chart the higher the wet bulb temperature or relative humidity the greater the cooling effect of the air.

Heat production and total heat loss for the body are dependent upon effective temperature for both still and moving air. With a fall in effective temperature the heat loss increases, as one would expect from the greater temperature difference between body and air. However, the body compensates for this loss by an increase in heat production in order to maintain temperature equilibrium of the body at approximately 98.6°F. In certain tests conducted on this study it was found that for persons at rest in still air the heat production in cold conditions does not entirely compensate for heat loss until a temperature of 80° is reached. From 65° to 87° effective temperature heat production and loss are nearly constant. Above this temperature range heat production increases slightly while total heat loss falls off with increasing rate until it becomes zero at an effective temperature of about four degrees above normal body temperature.

In the past most of the investigations carried out along this line were concerned with the questions of shock, drafts, removal of perspiration and sensations. One of the important results of this research work has been the establishment of summer and winter comfort zones. In Pittsburgh the former zone was found to be defined by the limits of 64 and 79 degrees effective temperature for persons wearing customary warm weather clothing and engaged in sedentary pursuits; the optimum condition in this range was found to be 71 degrees. This value would vary slightly for persons located in other cities throughout the country. The winter comfort zone in Pittsburgh was found to lie between the limits of 60 and 74 degrees effective temperature for still air, with the optimum condition occurring at 66 degrees; these results were found also for persons normally clothed and in sedentary occupations. A small variation might result for persons living elsewhere.

The movement of the air is almost as important as the temperature and humidity of the air in determining feelings of comfort. The subject of air movement brings one to the source of more complaints directed against air conditioning systems than any other defects, *i.e.* drafts. This local sense of cooling of a portion

Fig. 2 — Diagrammatic sketch of layout of operating room, recovery ward and air conditioning apparatus. From Houghten and Cook by permission.


RECOVERY WARD
OPERATING ROOM
A- OUTSIDE AIR INTAKE.
B- OUTSIDE AIR LOUVERS.
C- AIR FILTER.
D- TEMPERING COIL.
E- ELECTRICAL PRECIPITATOR.
F COOLING COIL FOR RECOVERY WARD.
G REHEATER FOR RECOVERY WARD.
H- FAN FOR RECOVERY WARD.
I- AIR SUPPLY DUCT (ABOVE CEILING) OF RECOVERY WARD.
J- AIR SUPPLY OUTLETS OF RECOVERY WARD.
K- RETURN GRILLE FROM RECOVERY WARD.
L- AUTOMATIC RECIRCULATOR DAMPER FOR RECOVERY WARD.
M PREHEATER FOR OPERATING ROOM.
N- WASHER AND DEW POINT CONTROL FOR OPERATING ROOM.
O REHEATER FOR OPERATING ROOM.
P- FAN FOR OPERATING ROOM.
Q- AIR SUPPLY DUCT (ABOVE CEILING) OF OPER ROOM
R AIR SUPPLY OUTLETS OF OPERATING ROOM.
S- GLASS SCREEN PARTITIONING OFF 15 INCHES SPACE ENCLOSING ALL WINDOWS AND ORIGINAL RADIATION (RADIATORS WHICH ARE USED TO REDUCE EXPOSURE LOAD IN WINTER)
T- COMBINATION ULTRA VIOLET AND INCANDESCENT OPERATING LAMP (ABOVE OPERATING TABLE) SUSPENDED FROM CEILING
U- COMPRESSOR
V- INDIRECT EXPANSION COOLER
W- COLD WATER STORAGE TANK

Courtesy A.S.H.V.E.

of the body may be the result of an excessive movement of air of normal temperature, air having a normal velocity but a lower temperature, an excessive amount of radiation to a cold surface or any combination of these three effects.

The fourth important factor in determining a person's feeling of comfort is the heat loss by radiation that takes place directly from the surface of the clothed body to the visible surfaces of all surrounding walls and objects in view of it.

In order to determine the extent of heat loss by radiation, tests have been made in which subjects were first exposed to a control room and then to a test room having exposed cold walls. Whereas the subjects felt an overall sense of warmth in the test room equal to that experienced in the control room, local feelings of discomfort sometimes resulted for those parts of the body directly exposed to the cold walls having temperatures of 50°F. or lower.

Some of this field work shows that for summer cooling and air conditioning an effective temperature of from 69° to 74° is desired by ordinary persons in the Pittsburgh district; from 71° to 74° for the College Station district in Texas; from 69° to 74° for Minneapolis, and from 68° to 71° for Toronto. It is readily evident that conditions in various parts of the country make little difference. Some of the studies made indicate the desirability of maintaining an indoor condition during the summer in the upper range of the comfort zone in order to eliminate the shock effect for individuals. In fact, there is considerable argument for definitely increasing the indoor effective temperature with rise in the outside temperature.

Physiological Reactions

Studies have been conducted recently to determine the physiological reactions of persons subjected to different effective temperatures and relative humidities when engaged in different activities. The American Society of Heating and Ventilating Engineers during the summer of 1936 made tests on men performing light work. In order to simulate conditions in mills in warm climates, the conditions maintained in the various tests were fairly warm and of relative humidities of 60, 75 and 90 per cent; however, no significant difference in the physiological reactions was found to occur.

Both the body temperature and the pulse rate showed a progressive change with the time of exposure in a hot atmosphere. This rise in body temperature is logically expected but increase in pulse rate is not necessarily a quantitative change resulting from exposure; rather it results from nerve stimulus. However, if psychic factors are eliminated, this stimulus is apparently more or less proportional to the rise in body temperature. For moderate conditions of exposure it was found that an increase in pulse rate of about 24 beats per minute accompanied a rise in body temperature of about 1 degree. For more severe conditions the pulse rate increased proportionately at a higher rate for the same rise in body

temperature; rises in body temperature of ½, 1, 1½ and 2 degrees were accompanied by increases in pulse rate of 12, 25, 38 and 70, respectively. After the maximum temperature at which the body can adjust its internal reactions to its environment has been reached, the progression of physiological changes is an accelerative process.

Other pertinent physiological reactions recorded for the subjects in this study included changes in vital capacity, systolic and diastolic blood pressures and leukocyte count. While a definite decrease in the vital capacity upon exposure to the hotter atmospheres is shown, the change is not significant in that the variation between individuals for the same condition on the same day and for the same individuals on different days is greater than the average change, owing to the severity of the atmospheric condition. The results also indicate a consistent rise in systolic and a less pronounced fall in the diastolic blood pressure for exposures in atmospheres above 87 degrees effective temperature; this effect of hot atmospheres upon the blood pressures agrees with the facts observed in the application of fever therapy.

A definite increase in the leukocyte count was observed upon exposure to the hot atmospheric conditions. However, unlike elevation in body temperature and increase in pulse rate, no definitely harmful significance can be placed on this increased count.

As a result of this work on physiological reactions to hot atmospheric conditions, deductions have been made fixing danger points or limiting the effective temperature conditions that should be allowed for working conditions. These, however, are not offered conclusively as definite limitations but rather are presented as evidence of what limitations should be considered.

Recently considerable interest has been shown in the application of air conditioning to hospitals, especially to summer cooling and air conditioning in operating rooms and wards. A study was conducted last summer and further work is now being carried out by the department of industrial hygiene of the University of Pittsburgh school of medicine in cooperation with the research laboratory of the American Society of Heating and Ventilating Engineers and the Magee Hospital in Pittsburgh. The layout of the air conditioning system and the operating and recovery rooms may be seen in figure 2. This system was designed by a committee of medical men and air conditioning engineers not to fulfill a predetermined opinion of what air conditioning should apply but rather to provide a flexible system that could be operated so as to supply a wide range of atmospheric conditions for experimental research.

The program of research includes the following items as outlined by a special committee of doctors and engineers, who were selected to represent the cooperating groups:

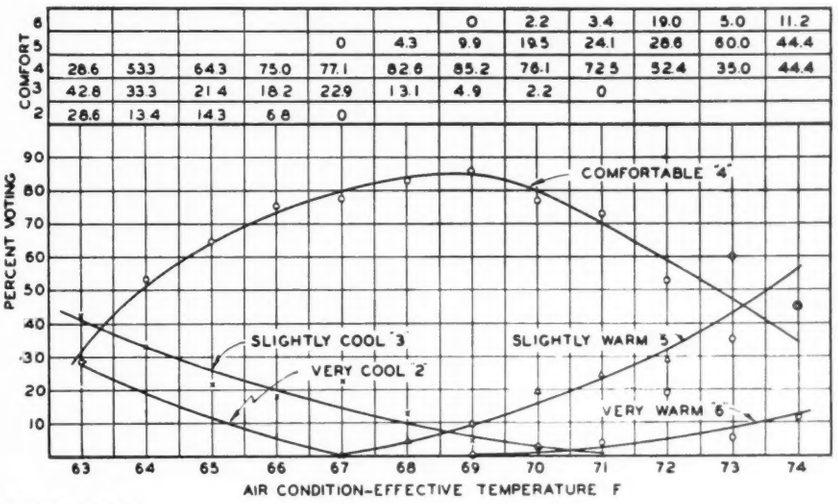
1. Feeling of Warmth: Optimum temperature and humidity conditions within the operating room and recovery ward for the best interests of the patient either directly or through greater efficiency of the operating surgeon and his attendants.

2. Bacteria: Bacteria content of atmosphere in an operating room in the past and with the present air conditioning system; how the bacteria content may be affected by ultraviolet sterilization and electrostatic precipitation of dust.

3. Anesthetic Concentrations: Relation between past performance without air conditioning and present performance with air conditioning and controlled ventilation, as affecting concentration of the anesthetic at different points in the operating room.

4. Static Electric Sparks: Relation between atmospheric conditions and the hazard of electrical sparking possibly causing ignition of air-gas mixtures.

5. Physiological Aspects of Subject: Medical observations relative to weight, blood pressures, blood chemistries and skin temperature; perspiration of attendants and patients; feeling of comfort, well-being and presence or absence of fatigue of operators; urine chloride of patient before and after operation; bacteriologic content of operating room air without and with occupants and its effect on healing; effect of the recovery room as it aids or deters patient's recovery.



Courtesy A.S.H.V.E.

Fig. 3 — Most comfort is experienced at from 67° to 70° degrees F.

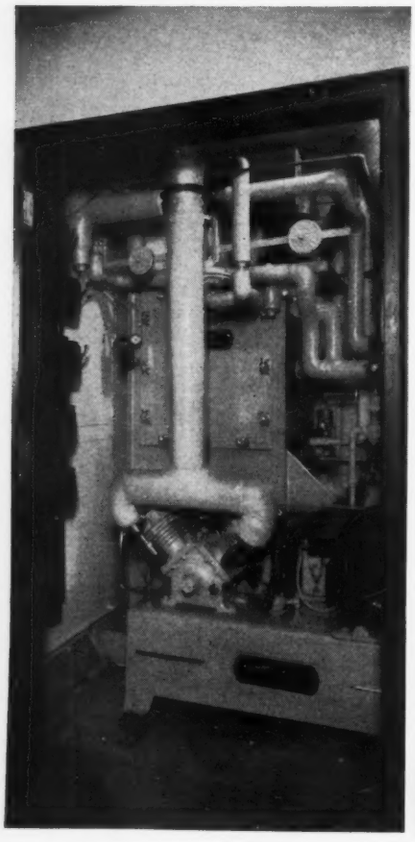
The portion of the study indicated in the first item pertaining to the summer has been largely completed. From the comfort chart shown in figure 3, which is similar in appearance to comfort charts made in other studies, a temperature range of from 67 to 70 degrees effective temperature would be selected as the most desirable condition. Separate classification of the data applied to men and women indicates maximum comfort for the doctors and interns at about 68° F., whereas the maximum comfort for nurses is a little above 69° F.

The bacteria content of air has been a controversial subject for some time. Work by Wells indicates that it becomes apparent in the practical

(*Continued on page* 63)

HERE TEMPERATURE AND HUMIDITY ARE UNDER CONTROL

1



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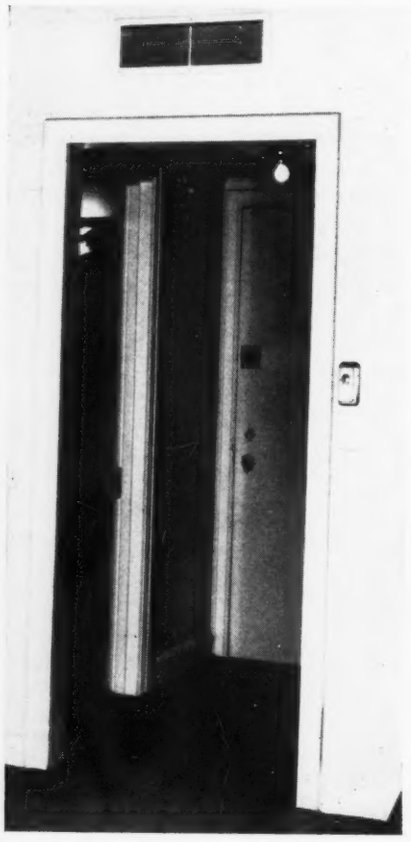
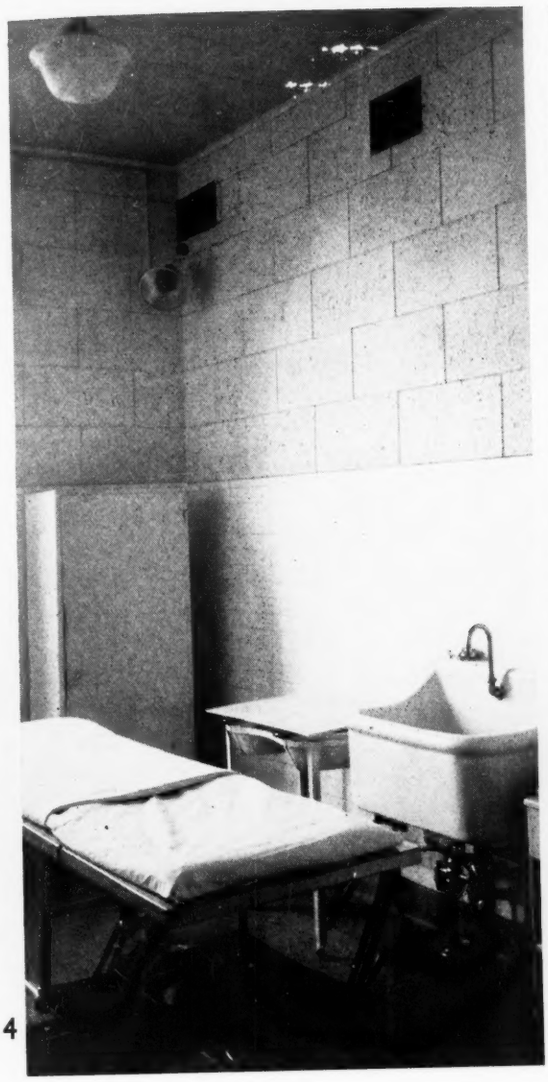


3

ON THIS PAGE: 1—Reception room of the air conditioned Florence Nightingale Hospital, Dallas, Tex. 2—Industrial design has its own beauty, as is revealed by this air conditioning installation. 3—Grille is installed for esthetic reasons not in the patient's room but in the passageway connecting room and bath.

ON THE OPPOSITE PAGE: 4—One of two air conditioned obstetrical delivery rooms at Ellis Hospital, Schenectady, N. Y. 5—The nursery is another favored location for air conditioning treatment. 6—Laboratory workers enjoy conditioned air in the new San Antonio Community Hospital at Upland, Calif.



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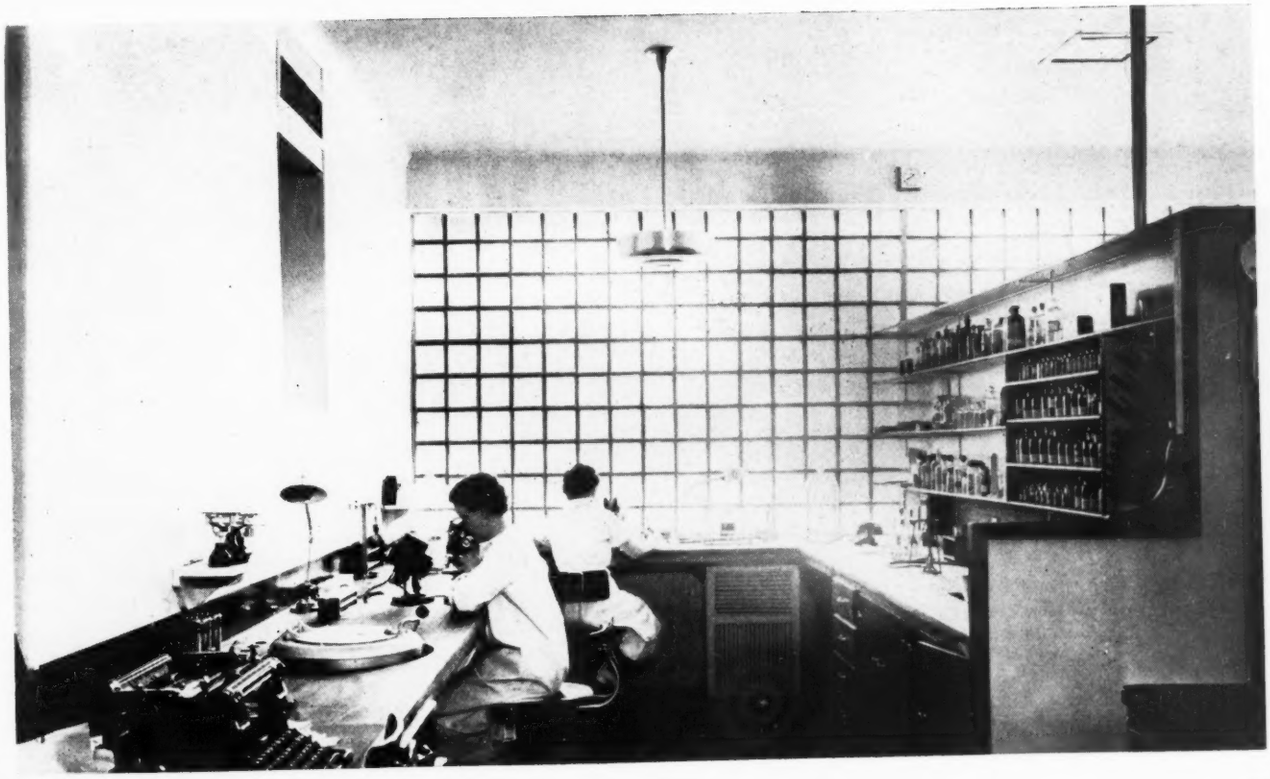

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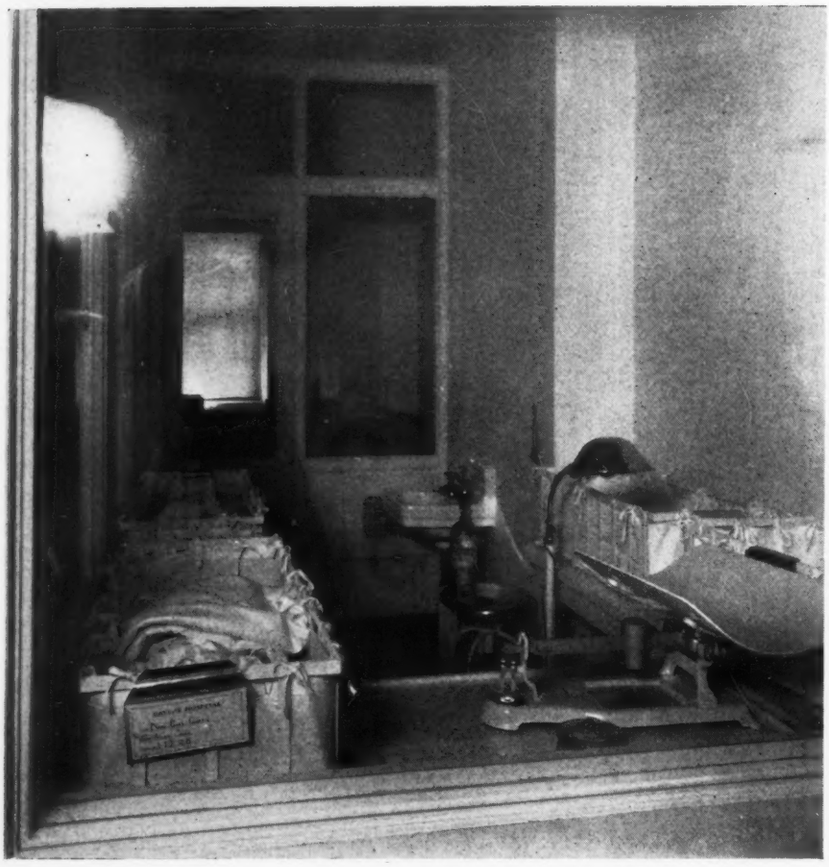

Through double walls of glass we get this view of the air conditioned baby incubator room at Florence Nightingale Hospital, Dallas, Tex. The entire building has controlled temperature and humidity.

A Trustee Considers Air Conditioning

CHARLES F. NEERGAARD

AIR CONDITIONING in its present stage, if properly designed, installed and operated, can add much to the comfort and well-being of hospital personnel and patients and there are possibilities although as yet little proof that it may contribute to health.

Only physiology and engineering have to any degree been related and coordinated through studies carried on by the American Society of Heating and Ventilating Engineers, the U. S. Public Health Service and the U. S. Bureau of Mines. The medical profession is keenly interested and investigations are being made in many places to explore the possibilities of air conditioning for the sick. Four factors that are particularly significant to hospitals—installation, operation, first cost and maintenance—are as yet largely unappraised.

If the hospital is to accept general air conditioning as an essential it will be necessary for able minds to focus on these different aspects of the problem, to obtain factual data, to make studies so controlled that cause and effect can be analyzed and to determine where and how it may be effectively used. Hospital costs already are excessive; research involving so large an investment as an air conditioning plant should be organized, centralized and financed essentially as research.

The consulting engineer retained by the board of trustees to design its mechanical and air conditioning plant can practically make or break the hospital. In considering so large an investment as air conditioning, the building committee, which in the past has accepted almost without question what the consulting engineer has given it, will want to be shown. Questions will be asked: What do the doctors want and will they get it? Is the equipment recommended the best for the purpose? Will it prove economical? Are the controls simple and effective?

The engineer will be expected to prepare a detailed forecast of mechanical operating cost for the hospital budget and should be retained to supervise the operation of his plant when completed, making quarterly inspections and reports. The most important decision the building committee has to make is the selection of its planning council, *i.e.* architect, engineer and consultant, for the conventional building must be largely redesigned in many details to make air conditioning effective.

The plant engineer, who already is struggling with a mechanical plant as complicated as a battleship, will find in air conditioning many new problems and responsibilities. The hospital engineer's lot is not a happy one. Some like it hot, some like it cold. Few are ever satisfied with the heat and ventilation he can now furnish them. If he is provided with the "ideal system of the future that

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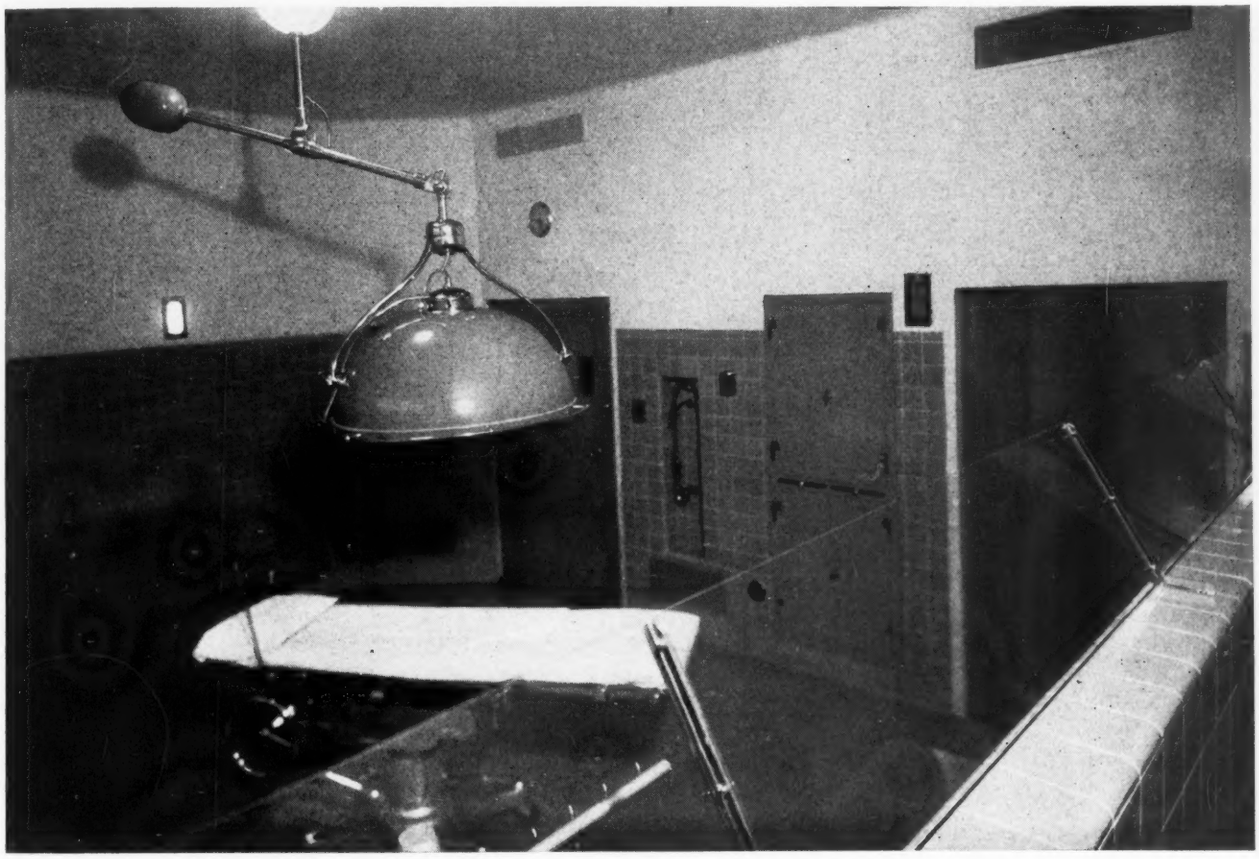
controls automatically the temperature and humidity in accordance with individual requirements in all parts of the building" many of his troubles will be over, if he can keep it in working order.

The board of trustees pays the bills. It has always paid the bills. With the present discrepancy between hospital receipts and expenditures, when obsolescence and plant depreciation are given their proper place in the operating statement, it is imperative that air conditioning be considered from the investment rather than the speculative standpoint. Bearing on this there are some known facts, many engaging theories and not a few extravagant claims. The past history of mechanical experimentation in the hospital merits special review and equally important is a frank appraisal of present standards of hospital planning and costs.

The public is rapidly being "sold" the idea that air conditioning is essential to modern living. The hospital, although largely exempt from the profit motive, cannot ignore the fact that hotels and restaurants, theaters and stores, railroads and passenger ships are finding comfort a commercially profitable investment.

The Heating, Ventilating and Air Conditioning Guide for 1939, speaking of hospital air conditioning, states: "Complete air conditioning of large hospitals involves a capital investment, depreciation and running expense which may not be justified. . . . In the North and certain sections of the Pacific Coast cooling is needed on but a few days during the summer, while in the South built-in room coolers can be used to advantage from May to October and in tropical climes almost continuously throughout the year."



The handsome air conditioned surgery in the Moses Taylor Hospital, Scranton, Pa.

The York Ice Machinery Corporation has just published an elaborate survey of the reactions of employers, employes and customers to air conditioning which in this case means primarily summer cooling. The study was conducted in the 13 largest cities in the U. S. and 100 firms were interviewed: hotels, banks, office buildings, stores and restaurants. The purpose was to determine from those who had had experience with it the effect of air conditioning on employe efficiency, morale, attendance and labor turnover, as well as on the customers, as indicated by their general satisfaction and volume of buying.

Ninety-four per cent of the employers stated that air conditioning increased employe efficiency; 86 per cent that employes handled customers better; 78 per cent that they "got along better together"; 95 per cent that customers favored it; 86 per cent that it had been a profitable investment. The only significant negative was that 67 per cent did not find any reduction in labor turnover.

This survey indicates the almost universal feeling in the business world that air conditioning not only adds to comfort but promotes employe efficiency and increases business.

Dr. C. A. Mills, professor of experimental medicine, University of Cincinnati, has made exhaustive studies of the relation of climatic and weather conditions to health, which have gone far in laying the foundations for and determining the biologi-

cal significance of mechanically controlled indoor weather. He says of winter air conditioning in hospitals:

"Two radically different groups must be properly conditioned by the same atmosphere: the sick patients who are unduly sensitive to chilling, and the doctors, nurses and orderlies who care for them. Should the building be heated for the inactive and easily chilled sick or for the healthy working group? Surprisingly enough, it seems advisable to condition in this case for the well people. Overheating for the busy nurse and orderly is harmful and they have no method of relief at hand beyond the wearing of light clothing. The patients, however, always have the privilege of extra blankets to cover most of the body. General winter standards for hospitals should be much the same as for office buildings.

"With summer cooling quite a different situation exists. The sick in bed lose half their effective heat dissipating surface because of direct contact with the mattress. Many have fever and dissipate more than normal heat. In summer it is the patient for whom cooling facilities should be adjusted.

"General operative mortality rises in proportion to the severity of summer heat. Tissue ability to fight infection falls sharply. Rooms for postoperative cases should have cooling applied on a gradually increasing scale. It seems wise to provide less extensive cooling in the operating room itself and to give greater attention to well-graduated cooling facilities in rooms for the postoperative patient."

Complete Air Conditioning

The hospital field has had little experience with completely conditioned buildings. One such is the maternity pavilion of Baylor University Hospital, Dallas, Tex., of which the superintendent, Bryce L. Twitty, reports:

"In the eighteen months of operation we have not lost a mother and have not had a single case of postoperative pneumonia. We have not lost a single case, either natural or premature birth, where the infant had a chance at all. Air conditioning seems to have increased patronage about 10 per cent."

Another air conditioned institution is the Corey Hill General Hospital, Brookline, Mass., with 60 beds. Dr. Albert G. Young, its medical director, is one of the few who has had the opportunity of applying and studying the results of air conditioning on all types of patients. His keen interest and enthusiasm are apparent in recent constructive papers which cover his experience with many kinds of cases. The plant cost $26,000 for 200,000 cubic feet of conditioned space, equivalent to 13 cents per cubic foot and $433 per bed.

The Robert Packer Hospital, Sayre, Pa., has considerable, though not complete, provision for air conditioning. H. E. Bishop, superintendent, says:

"We have not noticed any appreciable change in the last four years since we have used air conditioned operating rooms from the standpoint of complications of any kind. . . . As to wound infections our record has been better than prior to the time we had air conditioning, although this may be entirely due to the fact that our operating rooms were on the ground floor."

The latest type of ultraviolet lamp, properly controlled, will destroy pathogenic organisms but will not blister the personnel or the exposed tissue of the patient. Recent research has demonstrated that the use of these lamps reduces the contamination level of the operating room air by approximately 80 per cent. A special light weight helmet is used to protect the neck and ears of the operating room personnel from the rays, with a visor that shields the eyes. The cost of the newest equipment ranges from $2000 to $2500 per room. The ultraviolet lamps have a life cycle of approximately 4000 hours and, in order to keep them properly calibrated, they should be checked and adjusted at least once a month, which means a service charge of about $7 a room.

During the last five years the design of the air conditioning unit for individual rooms has been materially improved and the cost cut nearly in half. Most of these units supply fresh, cooled, filtered air and dehumidification; some supply winter heating as well. Many hospitals are using these units satisfactorily. In the light of the large investment involved in a central refrigerating plant and the present lack of uniformity in engineering practice, institutions might well experiment first with the smaller investment.

When the board of trustees and superintendent reach the conclusion that their hospital should be air conditioned, cost is the first question that arises. My analysis of the capital investment of a number of well-designed hospital plants indicates a range for present standards of heating and ventilating of from $350 to $450 a bed. How much in addition will summer cooling and controlled humidity cost? Albert Buenger gives some tentative yardsticks, based on the cost per ton of refrigeration, which range from one ton at $500 to 10 tons and over at $225 to $350 per ton. This is equivalent to from $1 to $1.50 per square foot of conditioned space.

What About Costs?

William E. Malin in *Skyscraper Management* reports a survey of the cost of air conditioning in 42 commercial buildings: "Twenty-two in smaller installations had under 100 tons (average 32.9). The average area cooled per ton capacity was 380 square feet of rentable space; the average cost installed was $428 per ton, equivalent to $1.13 per square foot; the operating and owning costs (interest and depreciation), 17.7 cents and 13.4 cents, or a total of 31.1 cents. A square foot of rentable area is equivalent to 19 cubic feet of building and, if air conditioning is installed during construction of the building, it will add about 8 cents per cubic foot to the cost."

How will these yardsticks apply to a hospital? Let us look at a new general hospital now under construction in New York State, the significant figures for which are as follows: bed capacity, 133; cubic contents, 750,000, or 5640 cubic feet per bed; floor area, five stories, 63,000, or 473 square feet per bed; cost of building and fixed equipment (68 cents per cubic foot), $513,800, or $3863 per bed; cost of heating and ventilation, $49,900, or $375 per bed.

An analysis of the plan to determine how much space should be treated if general air conditioning is

to be installed shows a total of 18,400 square feet, which includes patients' rooms and wards, operating suite, delivery rooms, nurseries, laboratories, dining rooms, staff meeting and locker rooms and entrance lobby. (This "rentable area" is 30 per cent of the total floor space of the building.)

The cost of conditioning this space, using Mr. Buenger's average of $1.25 a square foot, would be $23,084. Using Mr. Malin's ratios, this would call for 49 tons of refrigeration (380 square feet served per ton) at $428, or a total of $20,972.

Air conditioning a hospital presents many factors that differ from air conditioning an office building. The latter is occupied for from ten to twelve hours a day, 300 days a year; the hospital, twenty-four hours a day every day. In an office building the "rentable space" to be air conditioned approximates 66 per cent of the total; in the hospital referred to, only 30 per cent. The hospital's doors stand open and there is constant traffic in and out of the patients' rooms. With double the proportion of unconditioned space, the ducts would be longer and the demands on the compressors would be heavier.

An engineer who has designed many hospital mechanical plants and is widely experienced in commercial air conditioning estimates that to meet hospital conditions the installation cost would be at least 25 per cent higher than for a commercial building and the operating cost, more than double. This would indicate that for this hospital general air conditioning would add from $26,000 to $28,000, or from $200 to $217 per bed, to its cost for standard heating and ventilating of $375 per bed. Mr. Malin's operating cost of 30c per sq. ft. of "rentable area" would be increased to 48c which for the 18,400 sq. ft. would mean $8832 a year or $66 per bed per year, or $0.18 per bed per day.

If air conditioning becomes a proved essential, there are many features of conventional design and construction in which major economies may be effected to help meet the cost of the new feature.

A more flexible plan that makes it possible for the hospital to meet its demands for service, with fewer beds and consequently smaller buildings, should reduce the gross building budget from 10 to 15 per cent; the separate grouping of acutely ill and postoperative patients in one section of the patients' floor apart from those in the convalescent stages would lend itself to a multistoried design in which the operating rooms, delivery suite and acute sections could be superimposed. These sections in which air conditioning is most needed and which represent about one third of the total hospital area could thus be economically serviced without carrying ducts all through the rest of the building. Many new methods and materials will present major economies either in capital or maintenance.

Insulation of hospital walls, roofs and windows against heat loss has long been neglected. It also helps to keep the building cool in warm weather. The value of insulation is exemplified by the experience of a hospital at Charlottetown, Prince Edward Isle, in which the winters are long and the temperature for days at a time is far below zero. James Govan, the architect, designed for this building insulated walls and roof and special triple glazed windows which have shown dramatic results.

"The hospital's cost for power, light and heat of $32 a bed a year compares to an average cost of $106 per bed in 23 large New York City hospitals," Mr. Govan writes. "If due allowance is made for Charlottetown's high prices for coal and power as compared to New York, its actual figure would be but $24 per bed."

This record is probably unapproached by any institution in the country and shows what studied planning can accomplish for and with a heating plant.

Physiologic Aspects

(*Continued from page 57*)

application of ultraviolet radiation that a distinction must be made between clumps and individual organisms, or between dust and droplet nuclei. Air purification methods that depend on filtration or sedimentation may be more effective against dust, and ultraviolet rays may be more effective against nuclei, thus making these two methods complementary to each other. Whereas the bactericidal effects of ultraviolet radiation on micro-organisms suspended in air prove to be better than humidity, ozone or commercial germicides; nevertheless, it is shown that the killing power of ultraviolet radiation is greater for low humidities than it is for higher humidities.

The concentration of anesthetic in an operating room is a subject that has been given serious consideration in the past but its importance warrants an even greater amount of work in this field of research, since the efficiency of the attendants at an operation depends largely upon the freshness of the surrounding air. The concentration at locations in a room distant from the point of application can be reduced to almost any desired value by the volume of air change in the room, but draft considerations set up a limit beyond which it is undesirable to operate an air conditioning system.

Closely related to anesthetic concentration in the operating room is the hazard of electrical sparking possibly causing ignition of an explosive mixture in the room. A relative humidity of 55 per cent or more is generally conceded to be the best safeguard. Whether the grounding of all persons and objects in a potentially explosive field is suitable is controversial and must be approached with caution. An article by Victor B. Phillips which appeared in the April 1936 issue of THE MODERN HOSPITAL is helpful in clarifying the confusion on this question.

The problem of controlling atmospheric conditions for the comfort and health of people either in hospitals or in any other occupied zone is far from being completely solved; it is only through the continued close cooperation between the medical man and the air conditioning engineer that the various problems will be satisfactorily brought to solution.

Allergy Room Is Appreciated

LUCIUS R. WILSON, M.D.

MUCH has been written and said regarding the practicability of creating the optimum climatic conditions in patients' rooms. These conditions vary with the nature of the illness, but if physicians can determine exactly what climate is best suited to any group of patients, air conditioning engineers today can create it in any locality. Observations made by physicians over a long period of time have proved that many types of illnesses respond more quickly to treatment if the humidity, temperature, cleanliness and even sterilization of the air are controlled. Formerly, patients traveled hundreds of miles seeking a beneficial climate. Today it may be as near as the nearest hospital.

With these thoughts in mind, the John Sealy Hospital, Galveston, Tex., has undertaken in a small way to see what can be done for allergic patients by placing them in an air conditioned room. The floor and walls of this room have been refinished so that all dust particles are sealed. The mattress and pillows have been covered with rubber and, in general, the room has been prepared in the customary manner employed to minimize exposure of the patients to allergenic substances.

Filtered Air Reduces Pollen

The air conditioning apparatus recirculates the air in the room and at the same time brings in fresh air amounting to approximately 35 per cent of its output. Both the recirculated air and the fresh air pass through filters and in this way a large proportion of the dust and pollen is eliminated. The temperature of the room is maintained at about 15 degrees below the outside temperature and the humidity is maintained at 50 per cent.

The relief of patients who are suffering from asthma, hay fever or other allergic conditions after they have been placed in the room is often phenomenal. In many instances patients in great distress become quite comfortable after only a few hours. Several patients, however, have obtained no relief even after days of rest in this room. A study of these two types of reactions proves that the patients who obtain relief are sensitive to certain foreign materials that are filtered from the air and that the patients who show no relief are suffering from an infection or some condition the source of which is located within the patients' own bodies.

Much work is yet to be done before a full knowledge of the problems involved in the care of allergic patients is reached, but hospitals should be equipped to provide all possible sources of relief to this type of patient, according to Doctor Wilson

For this reason air conditioning becomes an aid to diagnosis. If the patient improves when confined to an air conditioned room, it may safely be assumed that his condition is due to some material that can be filtered from the air. If he does not show improvement, the chances are that he has an infected allergic condition and, until this condition is found and corrected, air conditioning will be of no use. In such cases the cause of the reaction is often difficult to determine.

No one would claim that air conditioning alone will cure a patient of an allergic condition. It, however, does offer relief to certain patients while the physician ascertains the foreign material to which the patient is sensitive and undertakes a desensitization program. If the quick desensitization treatment that is now being used in many places proves as efficacious as reports indicate, it will be quite possible to determine the substance to which a patient is sensitive within a short time after his entrance into the hospital. The antigen can then be prepared and given and the patient can be made comfortable throughout the entire process. This is particularly true in the case of patients sensitive to pollen and other allergenic substances.

An example of the efficacy of air conditioning may be found in the case of a patient with bilateral nephrolithiasis who also had a severe asthma. The stone in his right kidney was causing so much pain and damage that the surgeons considered it imperative to perform a nephrolithotomy at the earliest possible date. The asthmatic condition, however, was so severe that they feared to subject the patient to the hazards of an operation.

Value in Operative Cases

The patient was placed in the air conditioned allergy room and his asthma promptly disappeared. The operation was performed and he had an uneventful postoperative course in the allergy room. He was discharged from the hospital only to return a year later with the same difficulty caused by the stone in the left kidney. Again he was placed in the allergy room until the asthma disappeared, then operated on and again had an uneventful postoperative course. This patient's asthma, of course, was due to some foreign matter that could be filtered out of the air. Equally successful cases have been observed since the air conditioned allergy room has been in use.

While air conditioning is not beneficial to all allergic patients, it has proved meritorious in so many instances that any hospital that treats allergic patients is justified in preparing such a room.

Doctor Wilson is superintendent of the John Sealy Hospital, Galveston, Tex.

Hospital Dental Clinic

BERT G. ANDERSON, D.D.S.

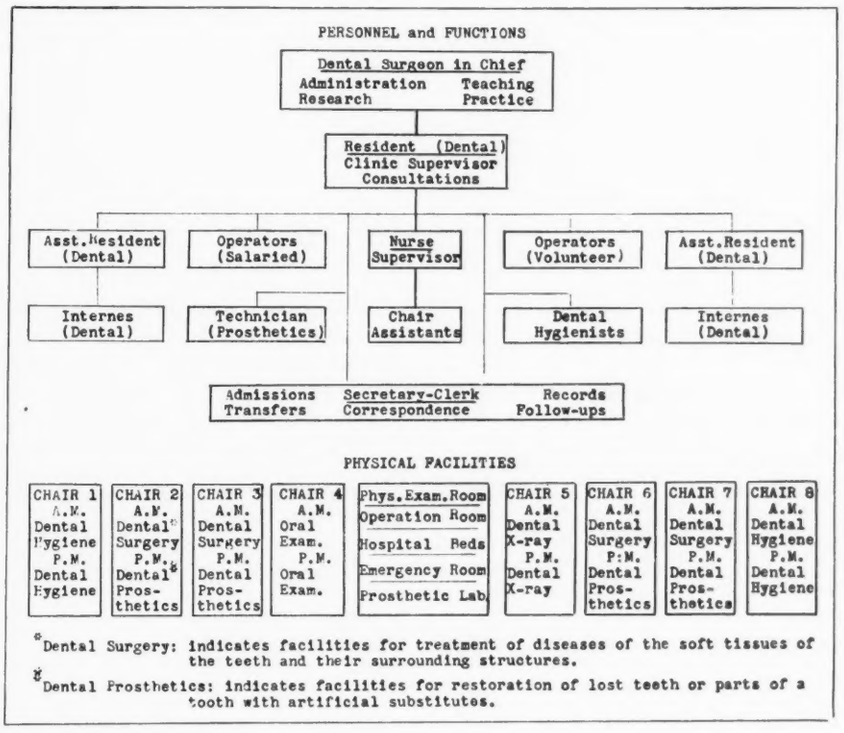
THE relationship of the modern dental clinic to the modern hospital is a subject deserving special attention at the present time. In recent decades hospitals and medical clinics generally have recognized the necessity of including dental services in their organizations. Although valuable work has been done, these services as a rule have been too limited in scope and not well integrated with the other specialties.

The failure of the hospital dental clinic to develop a completely adequate service has been partly due to the dentist's own inadequate concept of his field and the purpose of his work. Medical clinics and hospitals also have shown a lack of understanding of their particular need of dentistry. The result has been that the dental clinics have not progressed sufficiently beyond the point at which they took up their association with the medical clinics and hospital groups.

The organization of hospital dental clinics has been left largely to oral surgeons. Under their guidance the dental services developed mainly into clinics for the treatment of major oral lesions and the routine extractions of pulpless and badly carious or pyorrheal teeth. Dental hygienists have been commonly employed in these clinics, giving oral prophylactic treatment and often doing the routine mouth examination.

With the exception of limited facilities for the treatment of school children, patients from the indigent or lower income groups who cannot afford the services of private practitioners have received little dental care from the hospital clinics unless they were in need of the oral surgeon, exodontist or dental hygienist. The public school dental clinics have been sponsored largely by public health organizations and private philanthropy. Dental schools have shown little interest in training dentists for this type of service. They have emphasized education for private practice instead.

In addition to oral prophylaxis and exodontia, the great majority of dental patients are in need of fillings, denture replacement and correction of malocclusion. Most hospital dental clinics, however, do not offer their patients these additional services. Although dentistry has developed a remarkably satisfactory treatment for a carious tooth this condition is usually treated in hospital dental clinics only after the lesion has become extensive enough to require the removal of the whole organ. It is not uncommon to see patients who have been persuaded to have all or many of their "suspicious" teeth removed, because of the belief that they were suffering from focal infection, set adrift without adequate masticating function. This disability is added to their previous complaints. The correction of malocclusion of the teeth is another treatment that is considered to be too expensive to be rendered in a hospital. A dental clinic that is concerned primarily with the treatment of major oral diseases, tooth extractions and dental prophylaxis does not meet its entire responsibility to hospital patients.


PERSONNEL and FUNCTIONS
Dental Surgeon in Chief
Administration Teaching
Research Practice
Resident (Dental)
Clinic Supervisor
Consultations
Asst.Resident (Dental)
Operators (Salaried)
Nurse Supervisor
Operators (Volunteer)
Asst.Resident (Dental)
Internes (Dental)
Technician (Prosthetics)
Chair Assistants
Dental Hygienists
Internes (Dental)
Admissions Transfers
Secretary-Clerk Correspondence
Records Follow-ups
PHYSICAL FACILITIES
CHAIR 1 A.M. Dental Hygiene P.M. Dental Hygiene
CHAIR 2 A.M. Dental* Surgery P.M. Dental† Prosthetics
CHAIR 3 A.M. Dental Surgery P.M. Dental Prosthetics
CHAIR 4 A.M. Oral Exam. P.M. Oral Exam.
Phys.Exam.Room
Operation Room
Hospital Beds
Emergency Room
Prosthetic Lab.
CHAIR 5 A.M. Dental X-ray P.M. Dental X-ray
CHAIR 6 A.M. Dental Surgery P.M. Dental Prosthetics
CHAIR 7 A.M. Dental Surgery P.M. Dental Prosthetics
CHAIR 8 A.M. Dental Hygiene P.M. Dental Hygiene
*Dental Surgery: indicates facilities for treatment of diseases of the soft tissues of the teeth and their surrounding structures.
†Dental Prosthetics: indicates facilities for restoration of lost teeth or parts of a tooth with artificial substitutes.

It is assumed here that dentistry is a branch of the healing art and that a general knowledge of medicine and surgery is necessary for the intelligent practice of dentistry. This implies that a knowledge of the diseases of the teeth and of associated structures is also necessary in the intelligent practice of medicine. Dental diseases are important in both fields as local lesions requiring diagnosis and treatment, as primary focal areas of disease that give rise to secondary manifestations and as structures that show signs and symptoms of diseases in other parts of the body. These conditions illustrate the close relationship between the two professions.

Doctor Anderson is connected with the department of surgery, Yale University School of Medicine.

The value of a medical background in dental practice has been demonstrated by a small group of dentists who have acquired training in both medicine and dentistry. The pursuit of the combined course is undoubtedly sound for those who have capacities for both types of training and are also in a position to submit to the required years of study. The majority of dentists, however, must be satisfied to forego the additional medical education and to establish professional connections with those who have the training that they themselves lack. The modern hospital affords an opportunity for the formation of these associations which are necessary for the proper treatment of many cases in a general dental or medical practice.

In the early days of modern dentistry the chief concern of the dentist was the restoration and preservation of the human teeth. To many modern dentists this service has been given a secondary place and the teeth are thought of as important only in relation to some more remote diseases in the body. Dentists need to be reminded that these organs, besides being important to the patient's appearance, to speech and as focuses of infection, are primarily masticatory organs. Although mastication itself may be largely a mechanical function, its importance to the health of an individual should not be underestimated. This is a matter of as much concern to the physician as it is to the dentist.

Can Be No Mass Production

The provision of dental care for the great mass of people brings the problem of dentistry before public health institutions, hospitals and clinics. One of the chief difficulties in providing adequate dental care for all who need it is the fact that dentistry does not lend itself to mass production methods. Artificial replacement of lost teeth or tooth parts requires costly, time-consuming hand work that cannot be dispensed by prescription. This situation requires serious investigation in the hope of preventing much dental disease in the future. Simplification of methods of treatment may also considerably reduce the cost. Still more may be gained by better organization and utilization of the facilities now at our command. These are some of the most urgent dental problems that hospitals should take into account when they are laying their plans for the future.

The hospital dental clinic that is associated with medical research and teaching should be staffed with dentists who are actively engaged in investigation and teaching in their own special field. These activities, however, need not be confined to teaching and research institutions. The hospital might do much to help improve dental conditions by selecting for its staff dentists who are not only interested in immediate problems of treatment but are also concerned with the scientific and socio-economic problems of dentistry.

The better the qualifications of the dental staff, the greater becomes the hospital's opportunity for improving public service. The busy practitioner who finds he cannot keep abreast of all of the new developments in his profession turns naturally to the local clinic groups for consultations and assistance. A well-qualified hospital dental staff soon finds itself serving beyond the limits of the organization of which it is a part.

The accompanying chart shows a plan of organization for a dental clinic that is an adequate liaison department in a dental institution associated with a medical school and hospital of from 250 to 500 beds. In size this clinic is not out of proportion to other special services of a modern medical institution. It is designed to offer a broader scope of services than are commonly rendered in most hospital dental clinics.

A broader scope of activities for the hospital dental clinic implies that its personnel should be drawn from dentists who are widely distributed in the various dental specialities. The clinic head, who must act as the chief coordinating agent, should be experienced in the principles and practice of medicine as well as thoroughly and broadly trained in dentistry. Under his direction there should be younger men working in the special branches of dentistry, acquiring more fundamental knowledge of the dental structures and their treatment, and at the same time gaining experience in general medicine. Recent dental graduates might be admitted as dental interns to serve the equivalent of at least one year in this capacity. Those who may be pursuing courses in medicine or research studies may require from two to four years to complete an internship on a part-time schedule.

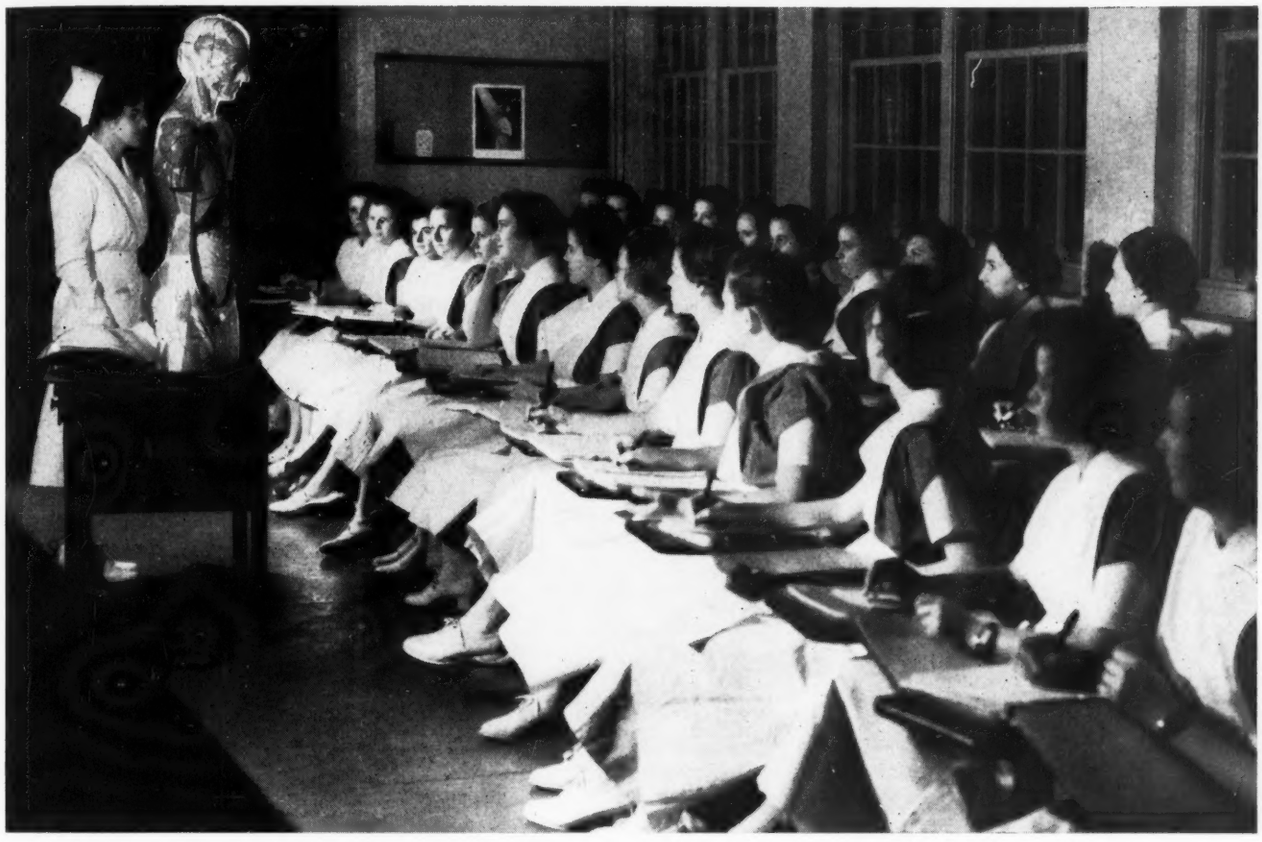
Building a Resident Staff

The internship would offer the recent dental graduate a new experience in treating hospital patients; give him an opportunity to gain more experience in routine dental operations in the clinic, and serve as a proving ground for the selection of outstanding men who should be encouraged to continue in the medical-dental field. These men should follow through with assistant resident and resident years during which time their interests and abilities will help to determine their course of training in research, teaching and the practice of dental specialties. In the resident year the opportunity should also be made for those who are so inclined to acquire experience in administrative work.

The routine dental treatment could be administered by the interns and voluntary or paid part-time operators, and the responsibility for certain sections of the clinic could be assigned to the assistant residents. All clinic activities should be centralized through the resident as indicated on the chart. In general, the house officer plan of other medical specialties points to a way of organizing the dental staff. Dentists who are already established in private practice can also be fitted into the organization.

The modern hospital that is looking to the dental profession for a more adequate service must be prepared to provide the dental staff with adequate facilities for performing its work. On the other hand, the dental staff can expect better quarters and facilities for work and is more likely to be received on an equal footing with the other departments only when it has demonstrated a willingness and ability to render a comparable service. It is the duty of the modern hospital to encourage and to help improve the relationship between the dental and other medical branches of its service.

Extramural Nursing Education



Student nurses benefit by the graduate work taken by their instructors. (Salem Hospital, Salem, Mass.)

PHOEBE M. KANDEL, R.N.

THE need for staff education courses for registered nurses engaged in teaching in schools of nursing and hospitals stimulated the educational committee of the Colorado State League of Nursing Education to suggest the establishment of such courses in Colorado. For the first few years these courses were held in the summer but the large attendance and the enthusiasm displayed led to a year round program of nursing education at the Colorado State College of Education. Since the inauguration of these courses in Colorado, schools of nursing in other states have invited the extension division of the college to send lecturers to conduct special courses.

Since 1930, 58 extramural classes have been conducted by the director of nursing education. Of these, 35 have been in Colorado and 23, in other states. The class meetings are arranged by the heads of the schools of nursing for hours of the day most convenient for members of the classes. The afternoon hours are usually suggested.

The subjects covered in these courses, according to the frequency with which they are requested, include: ward management and ward teaching; curriculum and principles of teaching; supervision and case study; hospital economics; history of nursing; nursing arts, and trends in nursing education. Additional subjects requested and conducted by other members of the college faculty are: personal hygiene; social hygiene; mental hygiene; psychology, and genetics and eugenics.

The content of the subject matter is the same as that given on the college campus. Each course offers four hours of credit on the quarter basis. Instead of the customary 40 fifty-minute class periods, the off-campus classes meet for 18 two clock-hour periods, or a total of 36 hours.

The study units prepared for each course include a statement of the subjects, the aims or objectives, references and a series of suggested questions to guide thinking.

Nurses who register for the course on "Curriculum and Principles of Teaching" devote the first eight hours to a review of the League's "Curriculum Guide for Schools of Nursing." Each student is asked to obtain a copy of this book on the undergraduate educational program. The teacher provides the outline for the first year's work and then the class, working in groups of two,

Miss Kandel is professor of nursing education, Colorado State College of Education, Greeley.

plans the program for the second and third years.

This experience is required so that supervisors and head nurses will appreciate the need for planning class instruction in advance and will realize that they must constantly keep the ward teaching activities coordinated with the class program. Members of the class work out the schedule on the basis of a 48 hour week so that if the undergraduate student has six hours of classes a week they are deducted from the 48; she will, therefore, be on duty 42 hours a week.

This schedule covers only the weekly class program on the theory that if hospital ward teachers comprehend this part of the schedule they will have a better understanding of the adjustments administrators have to make in an established daily class program. A choice of class programs is allowed so that nurses who are employed in schools of nursing that are conducted on a quarter basis can work on that plan.

Schedules Planned in Advance

Emphasis is placed on the importance of having the class schedule planned for the quarter or the semester for use by all of the teaching faculty, instead of having programs made out weekly and passed to the various teachers of the school and hospital wards. If class schedules are made out in advance it facilitates the planning of time on duty schedules. Having the class scheduled for the semester or quarter enables ward teachers to plan ward conferences as well as other methods of bedside teaching.

The basic methods of teaching are the same in nursing education as in any other profession. Perhaps the greatest difference is that we constantly help our students to apply their daily learnings to actual situations. Provision is also made to apply the laws of learning to help student nurses teach patients good health habits. Creative discussion, visual aids in teaching, guidance, the development of standards by which to appraise results, preparation of lesson plans and the observation of methods of teaching by master teachers are included in the subjects discussed. One of the most frequent assignments is the preparation of a lesson on the subject of "how to study."

Supervision, "what it is and what it is not," is carefully examined. The problem involves selection and organization of clinical teaching material correlating theory and practice. For example, the doctors' lectures on the various clinical subjects are correlated with the nursing arts; both medical and surgical nursing are taught concurrently; stress is put upon creative supervision and democracy in working with head nurses, students and other personnel.

The subject of conferences is given special attention because this method of teaching is regarded as especially valuable in the case study method of bedside teaching. Both the supervisor and head nurse are encouraged to handle overviews of the case study method of learning, and to have a knowledge of the objectives and criteria for writing case studies as well as those used for the evaluation of the written study. Considerable time is given to this phase of the teaching not only to make the supervisors, head nurses and graduate bedside nurses conscious of this socialized method of teaching but also to help students to become fine understanding nurses. This will enable them better to apply their learning to any nursing situation, whether it occurs in the hospital or in the various nursing activities in the community.

Actual practice is given in rating the classroom and bedside activities of student nurses. Attention is given to scheduling students' time off duty for classes through the application of the laws of learning, particularly immediate and delayed recall. If the head nurse rushes students to class and rushes them back to the ward immediately, much of what they have heard in the lecture room will be forgotten. If students have half an hour before classes, however, they will be able to practice delayed recall before going into the class and thus bring material previously heard and read to mind in readiness for a five or seven minute objective test. Then if there is an interval of half an hour after the class they can practice immediate recall and clarify abbreviations and "coded" notes.

In order to gain better understanding of the nurse-patient ratio to a ward situation, each member of the class makes a time study of the nursing activities of students as well as one of her own activities. A definite form is provided so as to make all of the studies uniform.

Instruction of Patients

All through the course emphasis is placed on the instruction that nurses must give to patients in regard to principles of personal hygiene and the importance of health habits as preventive and curative measures. The nurse-teachers are reminded that they must make the student nurses aware of the different problems and interests presented by their patients because of age, sex, nationality and social backgrounds.

The "telling method" of teaching needs to be emphasized a little more than we have been doing so that not only students but graduate nurses will be able to make their instructions clear to the patient. Telling a patient the best method to use in soaking an infected hand and how to dispose of the water and clean the basin or teaching a mother about to go home with a baby how to care for herself and the baby by demonstration and conversation are examples of correlating the instruction and experience gained in the school of nursing and hospital with home and community.

Emphasis is placed on the importance to all nurses who are engaged in teaching of obtaining experience in visiting nursing if they have not had such experience either in undergraduate schools or since graduation. Some of the nurse-teachers are not as alert to the opportunity of applying their teachings to community nursing as they should be.

The question that has provoked perhaps the greatest interest is that of financing the extramural classes. The director of the extension division advises on the fee to be established so that the income will meet transportation and hotel expenses, postage on books, mimeographed work, typewriter, secretarial assistance and the salary of the teacher.

In financing the class work, $4 per credit hour, or $16 per student per course, is the usual fee. The figures for the classes conducted out of the state show that the fees range from $15 to $23.50 per student per course.

Care and Treatment of Interns

JOSEPH C. DOANE, M.D.

Too many hospitals fail to recognize the duty they owe to their intern staffs, Doctor Doane asserts. These responsibilities are both educational and cultural. Even the moral welfare of this group should become the concern of the hospital. In order to serve the best interests of both interns and patients, the senior members of the staff should be men who are practical examples of professional dignity, etiquette and high morals

THAT July day arrives when the present intern staff departs and the hospital undertakes the responsibilities of receiving and initiating the new intern staff.

The recent graduate in medicine is neither a callow student nor an experienced physician. He is something of both. While he is anxious to "get," he is equally willing to give.

The hospital should not lose sight of the fact that here, in embryo, is the future skillful practitioner of medicine. There is no excuse for the paternalistic, often cold and unreasoning attitude that hospitals often display when these men arrive.

It is presupposed that the new group of interns has been carefully selected without resort to politics or pressure and that each young physician has been chosen because his personality and training seem fitted to meet the needs of the hospital. An intern may render highly satisfactory service to one institution and be an out-and-out failure in another.

Careful Selection Important

When interns who are scientifically incapable or uncooperative from a disciplinary standpoint enter the hospital, some fault exists either in the method of selection or in the handling of the intern staff in general. Splendid work has been done by some of the national associations in devising efficient methods of examination and proper intern schedules and in preparing effective standing orders governing resident staff conduct and relationships.

Unless interns are properly selected and supervised, friction is sure to arise. Nothing more harmful can befall the hospital than the occurrence of strife when this temperamental (because inexperienced) group of physicians is improperly handled. Such difficulties are in no way affected by the presence or absence of an intern honorarium.

The present plan of paying interns in experience instead of money has, of course, not always obtained. Historically, practice has varied. As early as 1788 in this country, resident pupils, as they were called, paid for their hospital experience. Later a period of apprenticeship of from two-and-one-half to three-and-one-half years was required, each young physician paying a fee of approximately $100. Early in the nineteenth century interns paid from $100 to $250 for training given under the tutorship of a preceptor.

Then as now the financial arrangements that existed between the hospital and the intern depended largely upon the value of the experience that the latter received and the former offered.

Let us observe how the first few days of the new intern's life in the hospital may well be spent.

If the institution has no medical officer in charge the new interns are received by the president of the staff, the chairman of the intern committee or the chief resident physician. If a medical director in the person of a seasoned physician is at hand, it should be his duty to assume the responsibility of initiating the new group into the ways of institutional medicine.

Seated about a conference table at the head of which is the medical officer in charge, these interns begin a serious day of schooling. The rule book is scanned and each important item therein is discussed and explained so that there need be no misunderstandings as to the intern's knowledge of certain necessary regulations. The attitude of the hospital toward the consumption of alcohol, the relationship of the intern to the pupil nursing staff, hours on duty, time for making rounds, methods of writing orders, keeping charts up to date, rules governing the accident ward and ambulance service, are all discussed in detail.

The intern's curriculum is next presented. The number of months spent in each service, the methods of rotation, the specific duties of junior and senior interns and the relationship of the floor nurse and the intern are fully covered. The hospital blueprint of organization is the basis upon which this administrative talk is given. Interns are informed that business must be conducted through definite routine lanes and that there is no authority for disciplinary action on their part against nurses or against other members of the staff.

The most important lesson that a young physician has to learn is the need for developing skill in understanding and working out human relationships. At this first meeting, it is well to lay down the precept that there is a vast difference between personalities and principles, that human beings may change, that they may be right or wrong, but that there is never any twilight zone between a right and a wrong principle.

Here the new intern is given preliminary instruction in the etiquette

of his relationship to his chiefs. This is necessary because the present generation is inclined to show less deference to the chief than was once the case. Indeed, the visiting physician, perhaps rightfully, fraternizes with his intern to a greater degree than did his medical ancestors. The new intern is told that his immediate superior administratively is the medical officer of the hospital and that from the standpoint of the treatment of patients the staff physician is chief. A respectful intern never argues with his chief no matter how much he believes him to be wrong, it is made clear. There are few traits more dangerous to the patient than an attitude on the part of the intern that he is always right.

Use of Record Forms

Every form employed in the hospital is demonstrated to the new interns and the method of its execution explained. This covers such items as permission for necropsy and for operation, release of responsibility on the part of the hospital because of the patient's premature discharge, method of pronouncing a patient critically ill, method of obtaining narcotic and alcoholic drugs, routine by which consultations are called and, finally, such personal matters as how an intern may exchange his night on duty with that of a colleague.

The hospital too often takes for granted that the intern, having finished a four year course at a reputable college, is now able to perform all those minor medical and surgical procedures that are necessary to the day's work, *i.e* spinal puncture, hypodermoclysis and abdominal and chest paracentesis. It is not fair to expect him to be able to assume a composure that comes only from experience when asked to perform minor procedures.

At the conclusion of the first class of instruction for new interns, resident physicians or interns are appointed as guides to acquaint the newly arrived physician with the details of his first assignment. In some cases it has been found that the establishment of regular demonstrations in the performance of various diagnostic and therapeutic punctures is the quickest and most certain way of teaching the new intern and of protecting the patient from unnecessary pain. It not only is unkind to the intern but is cruel to the patient to permit an unskilled young physician to continue to search for a vein that eludes him by making many punctures.

There seems to be an utter lack of good books of instruction for interns. Every school for nurses has or should have a procedure or technic book. Rarely is a complete book of standing orders and ward technic available for the new intern. He obtains his information on the accepted methods of carrying out the technical work of studying and treating patients mostly by word of mouth from his predecessors.

The intern schedule is of the greatest importance. While there are standard curricular requirements of a more or less definite nature in medical colleges, the nature and scope of the hospital intern service are at best only generally described by state boards of licensure.

A suggested intern schedule covering two years for an intern staff of 16 will give each man three months on Junior Surgery, Junior Medicine, Maternity, Laboratory, Accident Ward, Dispensary and Anesthesia, Senior Surgery and Senior Medicine. Two interns will be assigned to each of these eight services.

In making a schedule the chief aim is to provide proper care for the patient. When such a schedule is worked out and written down or printed for permanent reference, all goes well. In other hospitals the intern is blamed when he is unable to meet constantly overlapping assignments. He cannot be in two or three places at the same time, nor can he serve satisfactorily two or more chiefs who visit the hospital on or about the same hour. When an intern is punished for not complying with impossible rules he has a perfect right to resent such unfairness.

Another obstacle in the path of the intern is the attitude of the occasional hospital administrator who looks upon the intern staff merely as a necessary nuisance. Then there is the chief who expects instant obedience but who never for a moment expects to give anything in return. To such a man this is perfectly logical for he has neither the instincts of a teacher nor the time to teach. A physician of this sort is the subject of caustic conversation in the interns' dining room. An intern staff is quite capable of judging the true from the false in the medical personalities it meets.

Equally harmful to the intern is contact with the mercenary physician from whom he learns short cuts in medicine that deviate from the straight road of ethics. It is important that the visiting staff should consist of men who are practical examples of professional dignity, etiquette and high morals and who have a sound recognition of the obligation of physician to patient.

The institutional education of the young intern cannot be completed in the first day or the first month. Frequent contacts with medical administrative officers are necessary. Weekly conferences and the careful selection of members of the intern staff for key positions, such as the chairman of the intern medical society or of other committees, will increase efficiency in the care of patients.

Need for Scientific Study

It is the duty of the medical officer in charge to suggest keeping notes, use of a camera to record the appearance of interesting cases, attendance at postmortem examinations, collection of histologic slides, writing of papers (alone or in collaboration with their chiefs) and presentation of subjects at staff conferences. These are the first steps toward the formation of persisting scientific habits.

If intern staffs were thus early instructed and if on arrival they learned of the traditions, customs and rules of the hospital in which they will spend their formative years, there would be less heard of intern strikes, of dining room rowdyism and of alcoholic celebrations in their quarters. Good interns are usually found in good hospitals, but good interns may be spoiled by bad handling. If trouble arises, hospital boards should make certain that the fault does not lie largely with the institution. A good intern staff is a joy much to be sought. An intern staff that has little to do but debate its own grievances is worse than no intern staff.

Pete Price and other Navajo medicine men standing on ceremonial buffalo robe chant invocations of blessing on the new Navajo base hospital at Fort Defiance, Ariz., during the dedication exercises. At the left is shown the sandstone formation that gives the Navajo capitol its name.

"White Man's Medicine"

PAUL C. F. VIETZKE, M.D.

"WE do not know the white man's medicine, but we as Navajos are glad to help dedicate this new building in which the white doctors will help cure our people." This is the interpretation of the words of one of the Navajo Indians' leading medicine men, Pete Price, as the medicine men stole the show in the colorful dedication of the new $450,000 government hospital at Fort Defiance, Ariz., last summer.

Dressed in ceremonial costume, they blessed the new building by scattering sacred pollen at the entrance and on each floor, while chanting the prayers with which they dedicate their own homes. So great has been the progress during the past few years in government medical service to the Navajos; so many lives have been saved, and so much accomplished in the cure and prevention of disease that these venerable leaders of the tribe have recognized its value, and here for the first time officially accepted the white man's medicine, while still practicing their own ancient rites.

The new base hospital for the Navajos is built upon almost the exact spot on which Kit Carson, the famous Indian fighter, began his military campaign against the tribe in 1864. After peace was restored and the Navajos returned to their reservation in 1869, Fort Defiance became the seat of the government's medical, educational and administrative work for the Indians. In 1935 the five separate agencies for the Navajos, of which Fort Defiance was one, were consolidated into one Navajo Service, located at Window Rock, 6 miles from Fort Defiance. With its new base hospital, Fort Defiance is now the medical center for the entire reservation. It is called the Navajo Base Hospital because it is here that difficult and unusual cases from the smaller hospitals all over the reservation can be brought for diagnosis and treatment. The finest laboratory and surgical equipment, too costly to install in the other hospitals, is available to doctors and patients when needed. In addition to the new base hospital, 10 of these smaller hospitals serve the 50,000 Navajos who are scattered over their 16,000,000 acre reservation.

Fort Defiance is located in the northeastern part of Arizona, 1 mile from the Arizona-New Mexico state

Doctor Vietzke is senior physician at the Navajo Base Hospital, Fort Defiance, Ariz.

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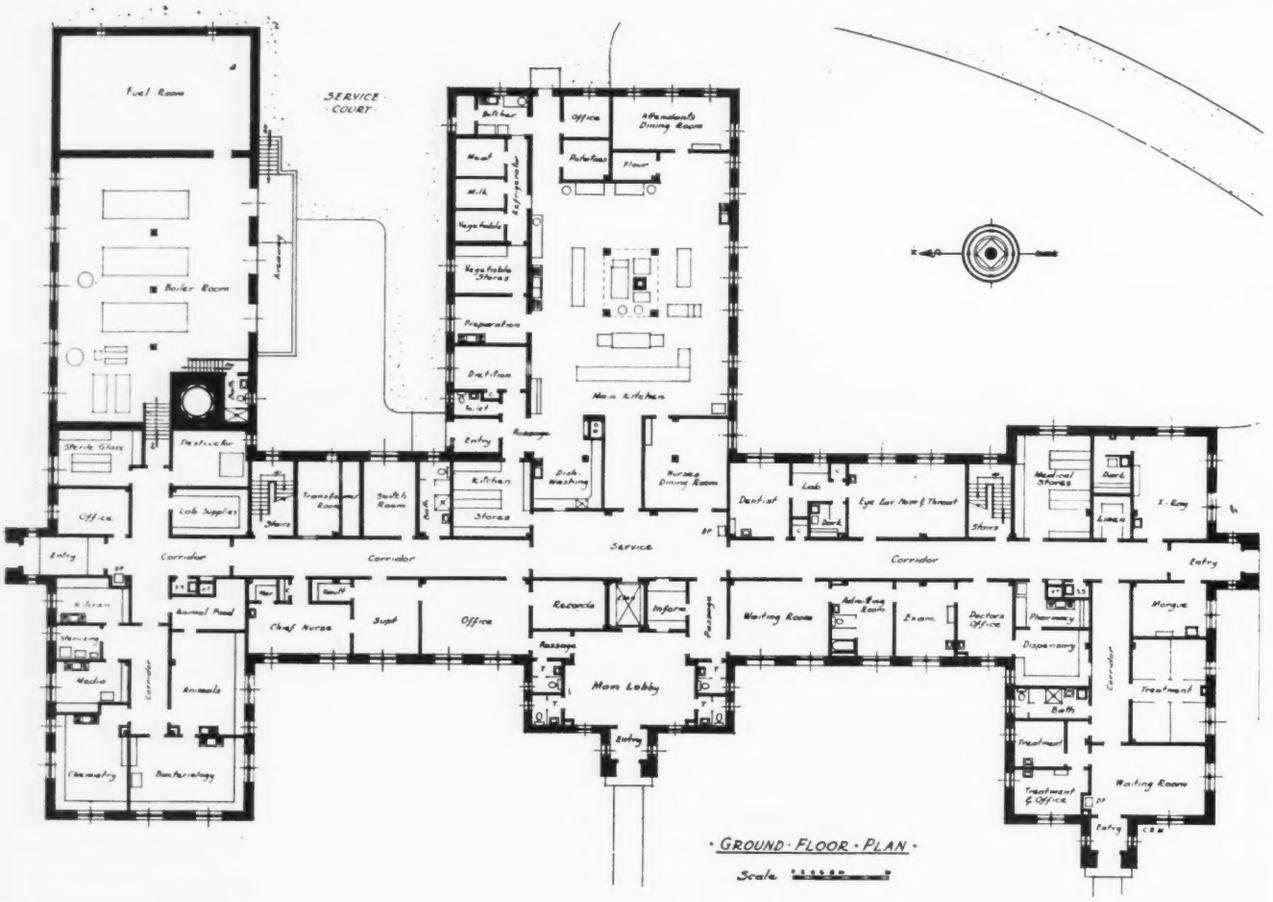

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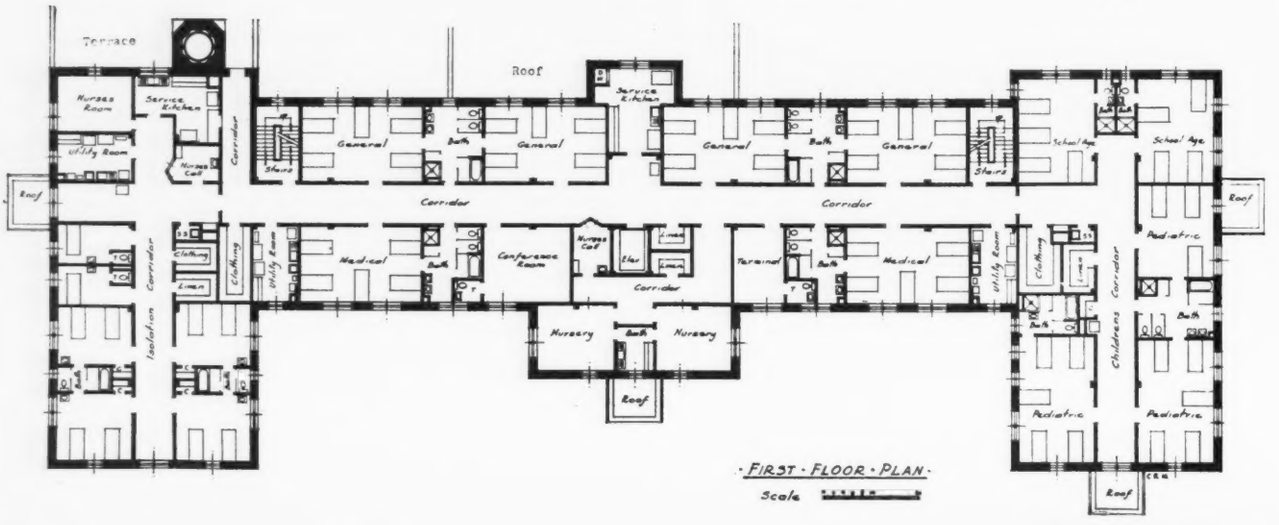

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line, where Bonita Canyon cuts Defiance Plateau. The country is heavily wooded with ponderosa pine, giving way in the foothills to piñon, cedar and juniper. One mile to the east is the outcropping of Wingate sandstone, rising some 500 or 600 feet and forming almost a natural boundary between New Mexico and Arizona for many miles. It is one of these sandstone formations that gave the new Navajo capitol at Window Rock its name. At an elevation of 7000 feet, Fort Defiance enjoys all the beautiful Arizona sunshine without the excessive heat. The sun shines every day in the year and the cold is never extreme.

It was only twelve years ago that a mission nurse who is still stationed on the reservation had an attack of appendicitis. At that time there was only a 30 bed hospital at Fort Defiance, with one doctor and three nurses. There was no laboratory, x-ray or hemocytometer for doing a blood count. The old telephone line from Fort Defiance to Gallup, N. M., the nearest railroad town, was out of commission; the reservation roads were impassable because of the summer rains, so no outside help could be obtained. Fortunately, the attack subsided without operation.

At that time the electric light plant was turned off at 10 p.m. and the night nurse made her rounds with a coal oil lantern. There was no x-ray machine in the entire reservation; now there are 10. Shortly after this a new frame building accommodating 100 patients was built, but within a few years it was inadequate to handle the demands made upon it by the Navajos. Since the occupancy of the new general hospital, the older building has been renovated and made into a 100 bed tuberculosis sanatorium. This makes a base hospital center of 140 general beds and 100 beds for tuberculosis. On the day of the dedication the new hospital, designed for 140 patients, was already overcrowded with 153 patients.

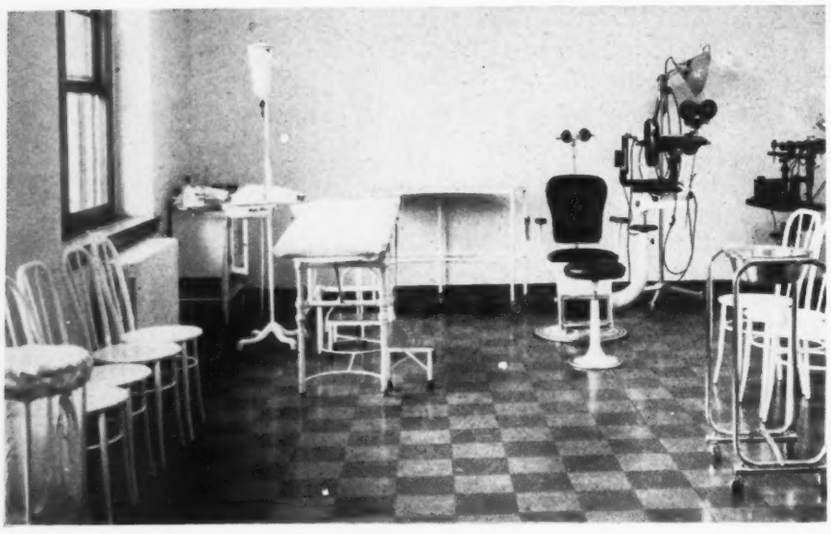
The progress that has been made in the last twelve years is shown in the striking contrast between the 30 bed hospital with one doctor and three nurses, and the present 240 bed medical center with a full-time staff of seven doctors, a dentist and 32 graduate nurses.

The new hospital is built of native red sandstone quarried about a mile

Old Hospital

The old frame building at the top has been remodeled into a tuberculosis sanatorium. The new hospital was designed to accommodate 140 patients and was already crowded on the hospital's day of dedication.

New Hospital



The new hospital boasts of an up-to-date eye, ear and throat clinic.

from Fort Defiance. The construction was done largely by Navajo Indian labor. It is a fireproof, class "A" building, modernistically unique in its architectural design. Built of stone, cement and structural steel, its floors are terrazzo, asphalt, tile and linoleum. Venetian blinds are used throughout. Nowhere in the Indian Service is there a hospital so well equipped in all its departments. Landscaping of the grounds is already well under way; firs and pines, many of which were obtained in the mountains just north of Fort Defiance, are being used largely.

On the first floor of the new hospital are a fully equipped out-patient dispensary, the general offices for the medical center, the kitchen and dietetics division and a large laboratory.

The out-patient dispensary has a separate entrance and waiting room. The waiting room leads directly into the dispensary corridor. Here are a desk and a card index system for quick reference to 5000 out-patient cards. From the corridor one enters the main dispensary clinic. This clinic is divided into four cubicles by installed curtain screens. Just across the hall are two well-equipped examining rooms, one for female and one for male patients. There are also a drug dispensary and a separate pharmacy for drug preparation.

From the dispensary unit one comes to the main corridor of the hospital. At the south end of it is the ambulance entrance. Just to the right is the general x-ray department, equipped with one of the latest 200 milliampere shockproof machines. The darkroom is modern in every respect. The x-ray interpretation room is equipped with an x-ray stereoscope and an eight window illuminator for the study of a serial x-ray. Here also a card index system has been installed for quick reference to films. At the present time we are studying the incidence and type of tuberculosis among the Indians by taking routine chest x-rays of all Navajos admitted to the hospital.

The adjoining room is the ear, nose and throat room. Next to it is a large eye clinic, 26 feet in length, with almost all the special eye equipment that any modern hospital can boast. The dental room is equipped with the most modern apparatus, including a dental laboratory. There is also a large room for physical therapy, equipped with short-wave diathermy, ultraviolet and infra-red lamps.

The main entrance to the hospital is a spacious lobby beautifully equipped with modern chrome furniture. Almost directly in front of the entrance are the elevator and information booth where anyone can get the information he desires, whether he speaks Navajo or English. Continuing down the main corridor, one reaches the administrative center of the hospital. First is the large general office; leading off from it are the senior physician's and chief nurse's offices.

The north wing of the first floor is devoted entirely to modern laboratory facilities. Here are found a general laboratory office, a sterilizing room, a media preparation room, a chemistry room for all types of blood chemistry and serology, a large bacteriology department and a separate room for research. The laboratory is also equipped with a basal metabolism machine, electrocardiograph and facilities for testing blood Wassermann reactions. There are an electrically refrigerated morgue and an autopsy room. This laboratory not only takes care of the work of this medical center but also serves the 10 outlying hospitals in the Navajo Area and other Indian hospitals in the Southwest.

In the wing directly back of the main entrance are found a well-equipped kitchen and dietetics office. Here is every useful type of apparatus commonly found in modern hospital kitchens. Another room off the kitchen has just been equipped with a 144 bottle sterilizer and pasteurizer. It is here that the formulas for all the infants are prepared. At the rear of the kitchen is a separate dining room for the Indian assistants and attendants.

The heating plant is a wing on the northeast corner of the building. It has three 89 h.p. boilers. A water softening system is now being installed.

The second floor of the hospital is devoted entirely to medicine. The south wing is given over to male medical cases; the center corridor, to female medical cases, and the front center, to pediatric patients. The north wing, an absolutely self-contained unit, is for isolation purposes. On the second floor over the heating plant is a sun deck where those patients who are able to can enjoy the Arizona sunshine.

The third floor is devoted to surgery and obstetrics. In the south wing is found the surgical unit, with walls and floor finished in olive gray tile. There is a large major surgery with an amphitheater that is used to introduce the Navajos to modern surgery and for Indian Service clinics. The operating rooms are equipped with stainless metal furniture, a major operating table, a large shadowless operating light, a modern anesthesia machine for nitrous oxide and cyclo-

propane, a surgical pump, electric bone saws and, in fact, all the instruments necessary to do every type of surgery that is required.

A large sterilizing room is equipped with a battery of instrument, utensil and water sterilizers, and an autoclave 22 inches in diameter. A minor surgery, nurses' workroom, nurses' and physicians' dressing rooms complete the unit.

Since there are no separate fracture or urological rooms, this type of work is done largely in minor surgery.

The north wing of the third floor is devoted to obstetrics. This, like the isolation ward, is entirely self-contained. There are a separate sterilizing and workroom and a nursery equipped with incubators, infants' heated dressing tables and separate bassinets, which can be rolled by the mother's bedside, for each new-born infant. The delivery room itself is finished in the same tile as the surgical unit. It, too, is equipped with stainless steel furniture and has the latest MacEachern delivery table. Four three bed wards and a private room for isolation comprise the unit.

Every effort was made to get the most modern thoroughly tested equipment for this new hospital, although not always the most expensive. Every adult bed in the hospital is of the gatch type. Besides these there are special beds, such as fracture beds, posture beds and invalid beds. Other apparatus includes an oxygen tent, a number of units for administration of oxygen by nasal catheter, several steam inhalators, duodenal siphonage apparatus and a large assortment of fracture appliances.

On dedication day, while the medicine men were being shown through the hospital they suddenly came face to face with a skeleton when a supply room was opened. One medicine man asked, "Is that a Navajo?" The interpreter came back immediately with, "No—Washington."

The corridors, utility rooms, kitchen and laboratory all have terrazzo floors; floors in the wards and private rooms are linoleum and those in the offices, asphalt tile. No adjoining wards or rooms are finished in the same color, but in various pastel tints of green, pink, blue and buff.

Thus out in the land of enchantment, seemingly far removed from the stream of American life, there is found a modern medical center served by a well-trained personnel. Here the Navajo medicine man comes to give his blessing to the white man's medicine.

Requisitions Control Stores

WARREN W. IRWIN

ADEQUATE control of stores is vital to any business concern and lack of control has resulted in many a business failure. This is especially true in a manufacturing concern that uses various finished parts to assemble its products. Control must be exercised from raw material stores through production to finished stores. An oversupply may cause a financial strain and an undersupply may easily disrupt the entire manufacturing schedule.

Hospitals have learned much from the experience of industry and may well use business or industrial methods in stores control. It is generally admitted that a central control of purchases and stores is desirable and that adequate records should be kept. Materials used on hospital divisions can be, and usually are, standardized. Lists of these materials can be printed for stock requisitions.

Both sides of the requisition sheet used at the Strong Memorial Hospital, Rochester, N. Y., are printed, one side for supplies and the other for printed forms. This requisition is 17 inches long and 12 inches wide and lists in alphabetical order most of the standard supplies and forms used. Space is provided for inserting special items.

The head nurse of a division or a ward fills in her weekly requirements in the proper column on Monday and sends the requisition to the administration office for approval. There it is checked and sent to the general stores to be filled. After the requisition is filled it goes to the purchasing department for pricing and making proper charge to the individual hospital unit.

Requisitions are gathered together once a month for pricing and charging and for adjusting the perpetual inventory records. The requisitions are placed on what is called a peg board.

The pegs on the board fit the holes punched in the form. The forms are laid one over the other, each form being placed one peg to the right of the one before. When the last one is on the board, a blank form is placed on top. All that is visible on the forms when they are on the peg board are the columns showing the list of the supplies, the quantity and the cost. The totals for the entire hospital are run across with the ruler, and are written in on the blank form. This one form is priced, totaled and given to the accounting office for charge against the proper department.

The system has many advantages:

1. It is convenient for nurses in ordering supplies.
2. Uniformity of nomenclature is assured.
3. Requisitions can be filled conveniently, since supplies may be placed in the same order in the stores department as they are on the requisition.
4. Pricing is expedited because supplies are in alphabetical order on the requisition.
5. Totals are easily made with the peg board system.
6. Procedure in the accounting office is simplified.

It is obvious that there can be many adaptations and uses for this type of requisition. It can be applied to other items, such as drugs or surgical supplies, and it can be used to accumulate the costs of an individual department. The plan is not novel or original in this hospital. It is described only for purposes of comparison and because its use in one institution has provided an adequate, simple and efficient method.

The author is purchasing agent at the Strong Memorial Hospital, Rochester, N. Y.

Governmental Hospitals

Importance in General Care

MICHAEL M. DAVIS
and
MARGARET PLUMLEY

MUCH has been said in the last few years of the extent to which the government is taking over functions formerly largely carried on by private agencies. To what extent do these statements apply to the hospital field? An analysis of current statistics may provide answers to the questions: "How many governmental general hospitals are there in the United States? Where are they? To what extent do they furnish the beds for the general care of the sick?"

The 1938 issue of the hospital number of the *Journal of the American Medical Association*[1] lists 503 general hospitals under the control of local and state governments. Eleven others under local control, not registered by the association, are included in this study, making a total of 514. These hospitals reported approximately 97,000 beds in 1937. The distribution of the hospitals and of the beds available in places over and under 100,000 population is shown in the table on the next page.

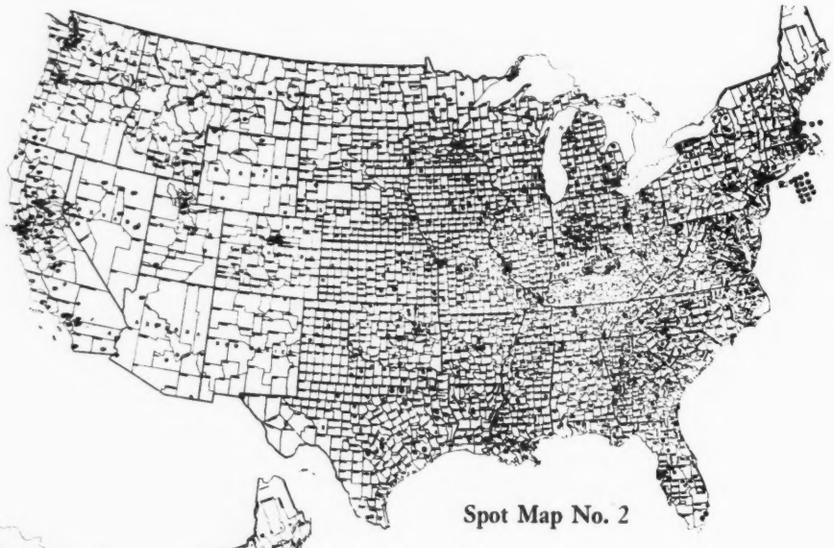
Most of the governmental general hospitals studied are located in the smaller places. Only 95 are in cities of more than 100,000 population. Nearly three-fifths of the general governmental beds, however, are furnished by these 95 hospitals. All but a small proportion of the remaining beds are in the 261 hospitals located in counties in which beds in other general hospitals are available.

Although such a large number of the beds in governmental general hospitals are found in cities with 100,000 or more population, they represent only about one-third of all the general beds available in these cities. In only 10 cities are 50 per cent or more of the general beds in hospitals under governmental control. In 25, less than one-third are in governmental hospitals.

In 29 of the 93 cities of 100,000 or more population there are no governmental facilities for general care. These cities are almost all located in the states bordering the northern seaboard and the Great Lakes. Only two large cities in the Far West and one in the South have no governmental general hospitals. Evidently there is a tendency for the cities in the newer sections of the country to rely more upon tax funds for the hospitalization of the needy sick.

In places with less than 100,000 population, there are approximately 177,000 beds in general hospitals, but only about one-fifth of these are in general hospitals under governmental control. It is evident that hospitals supported by tax funds provide only a small proportion of the general facilities in the smaller communities.

The 97,000 beds in governmental general hospitals comprise about 28



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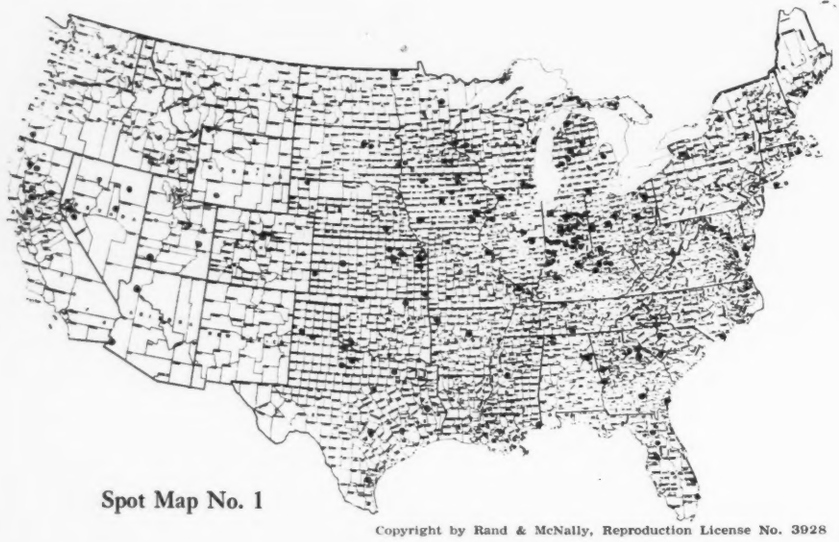

Spot Map No. 1

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Doctor Davis is chairman of the Committee on Research in Medical Economics, New York, and Miss Plumley is his assistant.

[1] Statistics in this article are based upon information given in the 1938 issue of Hospital Service in the United States, J.A.M.A., March 26, 1938, pp. 959-1050.

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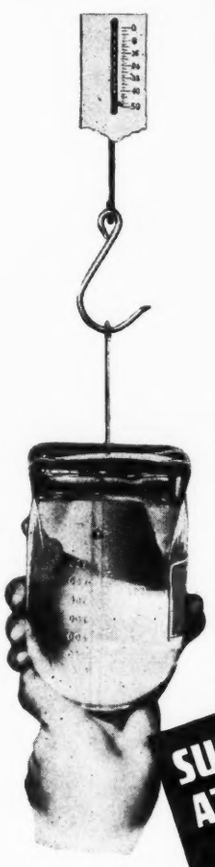

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per cent of the 352,000 general beds in the United States. The figures do not include the 50,000 beds in the 256 general hospitals under federal control, since their service is limited almost entirely to the care of special groups, such as veterans. The proportion of governmental beds would be slightly smaller if the same categories were used as were employed by the U. S. Public Health Service in its 1935 study of hospitals.[2]

The location of the governmental general hospitals is shown on spot map No. 1. The large dots represent hospitals located in cities with populations of 100,000 or more. The small dots indicate the hospitals in the smaller cities and towns. Although governmental general hospitals are found in every state except Vermont, the number per state is comparatively small except in a few, such as Indiana and California.

Governmental general hospitals are operated in but 14 per cent of the 3073 counties in the United States. Only 435 counties have such hospitals. On the map the number may appear great because the dots are large in proportion to the size of the map. If, however, all of the 4000 odd general hospitals in the country were indicated on the map with dots of the same size, most areas would be almost completely covered.

California has more governmental general hospitals than any state except New York and Texas; these hospitals are found in 42 of the 58 counties. In Michigan and Indiana, which rank second and third in number of counties with governmental general hospitals, the clustering of dots is more deceptive. Only 29 of the 92 counties in Indiana possess governmental general hospitals. In Michigan, there are only 31 out of 83; in Texas, 28 out of 254; in New York State, 23 out of 62 (7 counties in New York City alone), and in Ohio, 20 out of 88. The number of counties in which there are governmental general hospitals in the remaining states ranges from one to 15. Those western states in which the number of governmental hospitals is fewest are also those in which hospital facilities under all types of control are most meager.

In Indiana, 24 of the 29 counties in which there are governmental general hospitals have no voluntary hospitals. Nevertheless, taking the state as a whole, the beds in all the governmental general hospitals combined amount to less than one-fourth of the total of general beds. The larger cities in Indiana are mostly served by nongovernmental institutions.

In 155 counties governmental hospitals provide the only general hospital facilities. It is thus revealed that in only about 5 per cent of the 3073 counties in the United States do local governments assume sole responsibility for hospitalization of the sick.

The distribution of the 155 hospitals in these counties is shown in spot map No. 2. As would be expected, there are few "only" hospitals in the northeastern section of the country, *i.e.* only three in New York State and two in Maryland. The largest proportion was found in the Central States. The number in Indiana has already been discussed. There are 11 in Texas. In none of the other 33 states in which counties of this type are located are there as many as 10. Most of these hospitals are small. These "only" hospitals are all located in rural counties. Three-fifths of these counties have fewer than 25,000 inhabitants. In only five is the population more than 50,000.

Distribution of Governmental Hospitals

Governmental General Hospitals	*Number of Hospitals*	*Number of Beds*
In cities with 100,000 or more population	95	56,671
In places with less than 100,000 population		
(1) in counties in which there are nongovernmental general hospitals	262	34,288
(2) in counties in which there are no other general hospitals	155	5,963
Total	512*	96,922

*Two hospitals are omitted since their bed capacities are unknown.

The policies of both our state and local governments vary as to the provision of general hospitals. We have already seen that only a minority of city and county governments at present establish their own hospitals. Among the states, 22 maintain no general hospitals, while 26 states have one or more. Altogether, there are 47 state general hospitals. Eleven are in Pennsylvania alone; five are in Mississippi; three each in Louisiana and West Virginia, and two each in Ohio, Maryland and Michigan. Nineteen other states each have one state general hospital. Three states, Pennsylvania, Louisiana and Mississippi, have established a general policy or state system of providing for many of the needy sick in state-supported general hospitals. In Louisiana, there are no local governmental hospitals; Mississippi has three, and the only one in Pennsylvania is located in Philadelphia. Eighteen states have set up general hospitals in connection with state university schools of medicine, and a number of these institutions, as in Iowa, Michigan and Wisconsin, have established policies through which patients from anywhere in the state may receive care in these hospitals.

There is a sharp contrast between the extent of hospitalization for mental disease and tuberculosis as compared with general hospital care. In 1935 there were 573,000 beds in hospitals for mental diseases and tuberculosis, a number that greatly exceeds the total of general hospital beds, governmental and voluntary together. Of the 506,000 beds for mental disease, more than 90 per cent were under government control and of the 67,000 beds in tuberculosis hospitals, more than 75 per cent were governmental.

Governmental general hospitals under local and state auspices provide little more than 25 per cent of the 352,000 general beds. If the 47,000 beds in special hospitals (exclusive of mental and tuberculosis) were included with the general, the proportion of governmental beds would be even smaller. In summary, governmental general hospitals are important in some of the large cities and in a few rural areas but, outside of these, they play only a secondary part in the general hospital care.

[2]Mountin, Joseph W.; Pennell, Elliott, and Flook, Evelyn: Hospital Facilities in the United States. Part I. Public Health Service Bulletin No. 23. Washington, D. C.: Government Printing Office, 1938. Table 3, p. 12.

Centralizing Hospital Business

WILLIAM L. WILSON JR.

THE primary obligation of hospitals is to the patients who come to them for treatment and care. They also have other obligations to the doctors who make use of their facilities, to the communities in which they are located and to those individuals or groups who provide the necessary financial support.

In the past, the business aspect of hospitals was of relatively little importance. Governmental hospitals had only to obtain greater appropriations to meet deficits. Voluntary hospitals whose expenses exceeded their income had only to rely upon the largesse of philanthropic individuals to balance their books at the year's end. Proprietary hospitals showed a profit for their owners. The last ten years have greatly altered the picture. Government purse strings have been tightened to meet staggering relief costs. In spite of this fact, governmental agencies have had to supplement the decreasing subsidies to voluntary hospitals by private benefactors. Many proprietary institutions have been forced to close or have reorganized on a nonprofit basis. In the face of economic pressure, hospital boards and administrators have had to recognize the acute need for the establishment of sound business practice and systems.

Eight Business Functions

In the business function of the hospital there are eight separate, yet related activities: (1) traffic of patients; (2) accounting; (3) purchase and issuance; (4) credit and collections; (5) statistics; (6) personnel; (7) telephone service, and (8) information and messenger service. Each one of these activities is of considerable importance in hospitals both large and small. All have been carried on, in one manner or another, since the inception of hospitals.

At the present time with administrators and boards having to look more carefully than ever into the economic structure of the institutions for which they are responsible, the business activities of hospitals are becoming highly developed. The trend in hospitals' business activities almost approaches the proportions of a revolution the effects of which still have not reached many institutions.

The institutions pioneering the transition already have blazed a trail to be followed by others. Accounting and statistical systems have been revised and improved for purposes of standardization and clarity. Credit and collection systems have been set up as a means of reducing great losses from bad debts. Purchasing and personnel have been centralized for purposes of economy and control. Business "systems" have been instituted to an extent comparable to those in use in commercial and manufacturing enterprises operated for profit.

In order best to discharge the hospital's various obligations, the eight business activities should be grouped together under common administrative leadership. The head of the business function should be vested with administrative authority commensurate with the responsibilities assigned to him for purposes of controlling the activities concerned.

With such a degree of centralization of the business function, administrative lines of organization will be simplified; intra-functional operation will be placed on a firmer basis by the elimination of duplicated efforts and the better definition of responsibilities, and, in general, smoother, more coordinated and more efficient service will be rendered by the institution.

The influence of collectivism is being felt in hospitals to an ever increasing extent. Governmental groups, in addition to maintaining thousands of hospital beds in general and specialized institutions, are assuming a great degree of responsibility for the care of the indigent in voluntary institutions. Nonprofit hospital insurance plans are rapidly spreading throughout the country. If the medical profession does not offer prepayment plans for medical care soon, the federal government will assume the task on a mandatory basis. Local, state and national hospital organizations are sponsoring standardization in many hospital functions and activities.

From all sides the nation's hospitals are experiencing the influence of various types of centralized control. This centralization is designed to promote economy and efficiency in hospital operations.

It has been said that the hospital consultant of the future will be concerned with business organization and systems. In treating this important function, it is almost certain that he will extend the principle of centralization to the assignment of authority and responsibility. The performance of the function will be centralized whenever possible.

Centralizing Aids Efficiency

In bringing about the greatest possible degree of efficiency and economy within the business function, centralization of the type described will assist the entire organization materially in discharging its two fundamental obligations: (1) to the community, patients and members of the medical profession, all of whom rely upon its facilities, and (2) to the political body, philanthropic group or individuals providing the necessary financial support.

Mr. Wilson is assistant administrator of Strong Memorial Hospital, Rochester, N. Y. Abstract of master's thesis submitted to University of Chicago School of Business.

Organizing the Volunteer

MRS. JOSEPH P. DEVINE

The Children's Hospital of Buffalo discovered that its volunteer service would be greatly improved by being organized into a closely knit association

IN ORDER to bring volunteers into closer relationship with one another and to give them a broader understanding of work in all the various departments of the hospital, the Association of Volunteers of the Children's Hospital of Buffalo, N. Y., was organized. For many years volunteers had been busy about the hospital but not responsible to any one person. They knew little about the work of others or even the policy of the institution. The undesirability of such an attitude of isolation had been felt for some time but not until the past year was any effort made to meet the situation.

It was one of the Junior League workers who suggested the new association with the idea of organizing those who give their services to the hospital into a closely knit group. A director of the association was appointed and also a chairman to assist her. Rules and regulations were drawn up that would offer the volunteer an opportunity and a challenge.

It is impressed upon the volunteer that the association is a lay group, working for, by and under the professional group. By its existence the professional group is relieved of much over-time work that can be done by the volunteers. It is the intention of the volunteers to give service wherever possible and not to interfere by word or action with the professional group.

Every applicant must come first to the director's office where she is interviewed as to the possibility of work and an effort is made to place her where she will be best adapted to her job. She signs for two months and is sent to the director of the department in which she is to serve. At the end of two months if she is accepted she signs for the rest of the year. If she is not happy in her place and desires a change, she talks it over with the director and a change is made. She must also sign a pledge of loyalty to the hospital.

Volunteers are required to wear identical uniforms which they provide themselves and each one also wears an identification pin with her name on it when she comes on duty. She signs when she arrives, jots down where she may be found while in the hospital and notes the time of her departure. A service stripe is given for each year of service.

The departments of the hospital offer plenty of scope for volunteer service. In the dental clinic, which has six chairs, a well-organized group of 15 girls serve with one as a leader. The clinic hours are from 10:30 a.m. to 12:30 p.m. and from 1:30 to 4:30 p.m. In the main office one volunteer is on duty in the morning and two volunteers are on duty from 1 to 4 p.m.

Six girls act as drivers and 20 work in the different wards of the hospital amusing the children. These are the "play ladies" and are most popular. Every day in the week from 3 o'clock to 4:30, two or three of them can be found in every ward. The heart and orthopedic clinics each have a volunteer; the allergy clinic has four and a leader who comes twice a week for service. The eye clinic has four regular volunteers with a fifth who substitutes when there is an absence or an extra clinic. The speech clinic has a volunteer who comes every week to give two or three hours to helping children to talk who have been successfully operated on for cleft palate but who have speech difficulties.

There is also the emergency squad. The leader of the squad is in charge and is able to provide a worker on fifteen minutes' notice if necessary.

Members of the association are required to take a course of training from which they gain some knowledge of the hospital and its various clinics. To this end 16 girls sit in at the different clinics while the physician in charge lectures on the medical side of the work as he examines the children. Meetings held at the hospital once a month also provide an opportunity to give further training to the girls and to adjust minor details.

The association has 78 members, Junior League girls, workers for the Volunteer Service Bureau, the Children's Hospital Aid Association and those who are not a part of any organized group; all come together and work as a unit in the Volunteer Association.

As a volunteer grows in efficiency, she assumes corresponding responsibility and her work grows increasingly valuable to herself and to the hospital. Volunteers have proved themselves loyal, regular and responsible. With so much to give on both sides, the hospital's and the volunteer's, there cannot help but be a healthy, happy outcome for all who are concerned.

Mrs. Devine is a trustee of the Children's Hospital, Buffalo, N. Y.

A Trustee's Privileges

It is the privilege of hospital trustees to participate in the creation of specialized educational machinery that is of enormous social value and to regulate its growth, whether independently or in affiliation with universities. . . . In many ways the hospital trustee has the opportunity to make the world a better place to live in and he is fortunate above the average man. Once fully awakened to his task, he has a never ending series of useful and interesting duties to perform and is immune from the affliction of middle-age boredom.—S. S. GOLDWATER, M.D., *commissioner, Department of Hospitals, New York City.*

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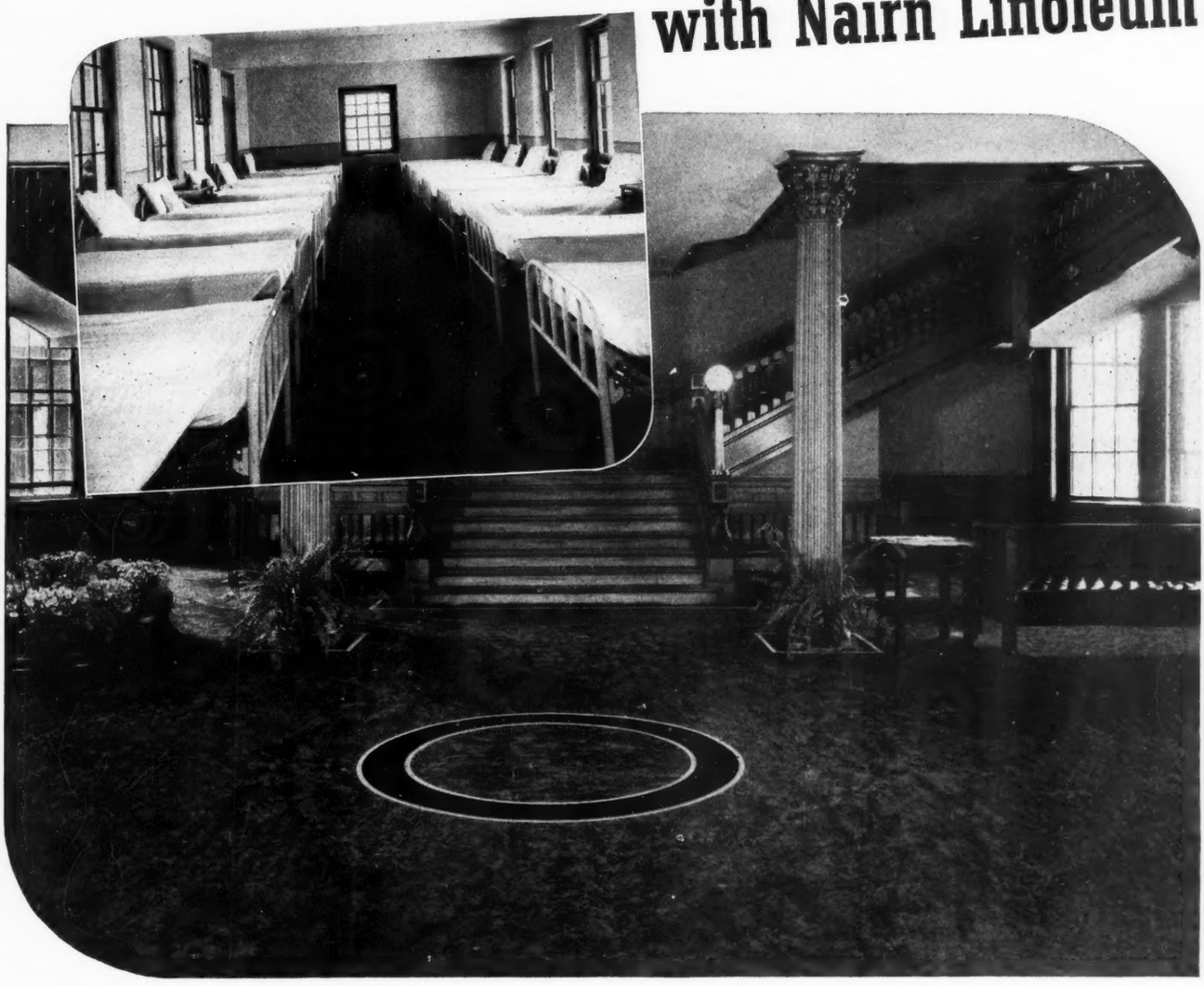

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Educating Executive Housekeepers

ALTA M. La BELLE

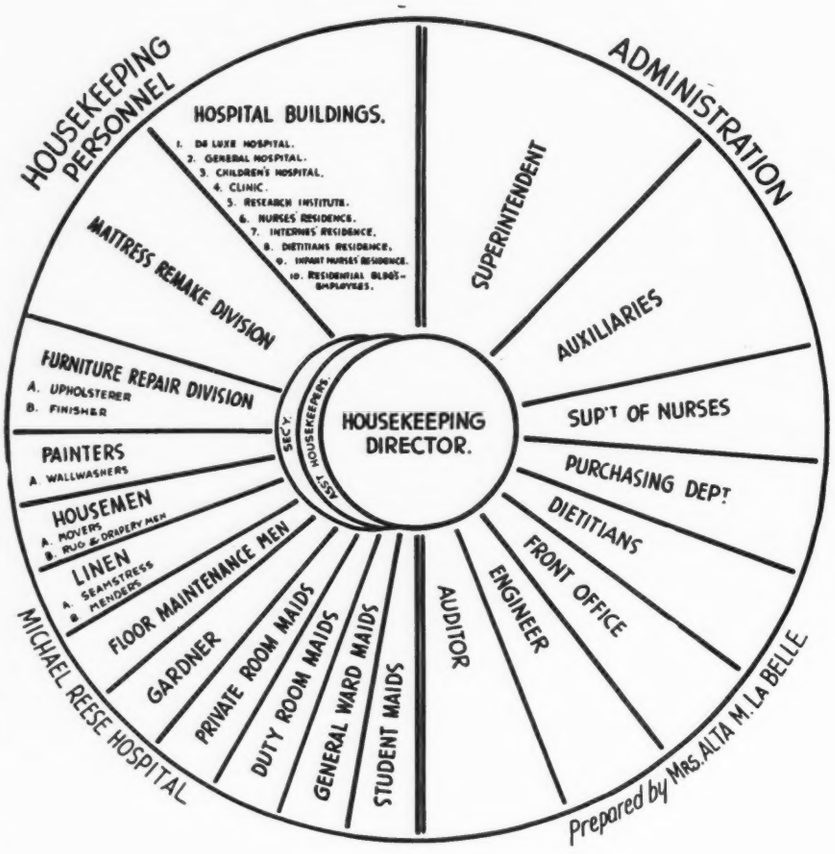
WITH the increasing demand for specialists in every occupation, institutional housekeeping has felt a serious need for better trained personnel. Judging from the applications that I have received for employment as executive or assistant housekeepers, it would seem that women with no further qualifications than that they have managed their own small households feel that this meager training qualifies them to direct an institutional housekeeping department. Any thinking person will, of course, realize that the smoothness and precision with which a large institutional housekeeping department must function can be achieved only by a well-educated and highly trained executive.

While I do not feel that a college or university degree is necessary, at least a junior college education is imperative.

The work of an executive housekeeper requires a healthy body and an alert and versatile mind; therefore, some physical training should be included in the suggested course of subjects.

The student should serve an apprenticeship of perhaps one year. It is my belief that most hospitals would welcome housekeeping apprentices and would cooperate with the junior colleges in placing their students. If that is not possible, the student should take a linen room position in a hospital, hotel or club until she has acquired the "feel" of giving and maintaining a high standard of service. From the linen room, the qualified person usually progresses to floor housekeeper or inspectress, after which, if she has the requisite qualifications, she should develop into an executive housekeeper. The salary range is approximately $50 a month for linen room work and $75 or more per month for inspectress work.

Mrs. La Belle is executive housekeeper at Michael Reese Hospital, Chicago.



To emphasize the relative importance of the housekeeping department let me quote "Hospital Dollar" published in the July 1937 issue of The Modern Hospital. Full personnel expenditure ratios are not itemized; only major salary ratios are given:

135 Bed Hospital:	
Nursing School	$0.1533
Dietary Dept.	.0473
Housekeeping Dept.	.0800
225 Bed Hospital:	
Nursing School	.1484
Dietary Dept.	.0416
Housekeeping Dept.	.0758
387 Bed Hospital:	
Nursing School	.1166
Dietary Dept.	.1000
Housekeeping Dept.	.0750

It will be noted that the cost of housekeeping personnel is exceeded in the 135 and 225 bed hospitals only by the nursing school.

The duties and contacts of a housekeeping director can perhaps best be designated by a chart. The accompanying wheel has been drawn up to describe the contacts the hospital housekeeping director is called upon to make during her day's work. It is divided into even halves: one half denoting contact with the administrative group, the other, contact with her own housekeeping personnel. They are of equal importance.

First in importance on this wheel is the housekeeper's relation to her superintendent. He sets the policy under which she must operate. All major problems and all policy changes must be discussed with him.

Second in importance are the auxiliaries. These are usually made up of women who are philanthropically minded or whose home ties do not

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  - Budgets
  - Statistical Records
  - Linen Control System
- Merchandising and Chemistry
  - Fabrics, Dyes, Cleaning Materials, Carpets
  - Formulas for Polish, Stain Remover
- Interior Decorating
  - Periods
  - Woods
  - Furniture Repair
  - Furniture Refinishing
  - Upholstering
- Sewing
  - Draperies
  - Slip Covers
  - Specialties
- Architecture and Engineering
  - Blueprint Reading
- Entomology
  - Household Pests
- Public Speaking
- Psychology
  - Personnel Relations
- Cleaning Procedures
  - Equipment
  - Floors
  - Upholstery
  - Rugs
  - Walls: Paper, Paint

demand all their attention. Hospitals, unlike hotels or clubs, are rarely self-sustaining. Because of the cost of medical research and the need for costly equipment, many departments in the hospital produce absolutely no revenue. This is why the auxiliaries have such an important place on the hospital chart. In various ways they finance these projects and oversee them.

Third is the contact with the superintendent of nurses and with the nursing department. There are many places in which these departments overlap and it is difficult sometimes to differentiate between them in assigning responsibility for borderline jobs. Hence, much planning and routinizing must be arranged between these departments.

Fourth is the purchasing department. Inasmuch as a central purchasing power is necessary in a large institution, the purchasing agent is never permitted to buy for the housekeeping department until the housekeeper has recommended the articles or materials that she needs. Also, the housekeeper must purchase all "specialties," which gives her another contact not mentioned on the wheel, *i.e.* "the trade."

Fifth in importance is the contact with the dietary department. Here the housekeeping duties vary according to the policy of the hospital. More often than not, the housekeeping department has to service the floor kitchens and often the main kitchen. Here, too, there can be much overlapping of duties if the housekeeper and the dietitian do not get together and carefully work out the schedules of their respective personnel.

Sixth is the contact with the front office. There must be constant communication between the front office and the hospital housekeeping department to ensure the fact that every possible room is in rentable condition at all times.

Seventh is the engineering department, that usually oversees the work of the carpenters, plumbers, electricians and general repair men. When major changes are under way it is important that the work program be carefully planned with the engineer.

Last, but not least, on the administrative side of the wheel is the contact with the auditing department. It is here that the budget, pay rolls and all financial affairs are kept straight. It is here that the yearly budget of the housekeeping director is approved and the ratio of expenditure for her department is really set up.

The largest section on the personnel side of the wheel is devoted to the many buildings that come under the housekeeping director's supervision. The hospital that is large enough to require an executive housekeeper is usually spread over many buildings, as may be seen from this section of the chart. The contacts are with doctors, nursing supervisors and resident employes, and the problems in each house are vastly different.

The next section is the mattress remake division. The hospital mattress is so much used and abused that mattress and pillow reconditioning is of major importance.

What is the future in the field so far as salaries are concerned? In a survey of the 117 hospitals and sanatoriums in Chicago, 75 reported salary schedules for executive housekeepers (usually including maintenance) ranging from $40 to $250 per month.

HOUSEKEEPER'S CORNER

• Our maids are employed with the understanding that they are on three months' probation, says Mrs. Adelaide Maloney, executive housekeeper of the Presbyterian Hospital, New York. We try to select neat, clean women between the ages of 21 and 35, strong and of average weight, preferably single with no encumbrances. They must have at least a grammar school education and more is an asset.

When a maid is first put on duty, we have her work with one of our senior maids under the supervision of an assistant housekeeper. During that time she is trained according to our methods of cleaning and the importance of cleanliness is emphasized. She must be quiet, unobtrusive and thorough in every detail. As soon as she proves herself capable she is given a territory of her own.

She is instructed to obtain permission from the nurse to enter a patient's room. She is cautioned not to enter into any discussion with a patient, particularly about the affairs of the hospital.

At Presbyterian, we have a meeting of the entire personnel once a month. At this time we rectify any inefficiency noticed during the previous month and take up new methods of cleaning whenever necessary. We welcome suggestions and take action on reasonable complaints.

• The housekeeper should have the privilege of hiring and discharging the employes who are under her jurisdiction. She cannot control her organization unless her workers understand that if they do not know or do their work, she can discharge them. I do not see how any housekeeping organization, which is probably the largest department in any hotel or hospital, can manage if the personnel employed in it is hired by the main office. Adequate salaries should be paid. How can that be done? By budgeting each department. Let the housekeeper pay the salary to which she thinks each person is entitled. The prestige of an employe is gauged by the salary he receives and not by the title he holds.—JOHN D. MCLEAN, M.D., *Rush Hospital, Philadelphia.*

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Food Clinic Comes of Age

FRANCES STERN

In the second of the series of articles on food clinics Miss Stern tells of the growth and development of the Boston Dispensary food clinic and outlines the training of the students

THE food clinic of the Boston Dispensary, which was created twenty-one years ago, has come of age this year. The venture was begun with limited space and meager equipment but with faith in its outcome on the part of the director of the dispensary and the dietitian. It was of real interest to social workers, although an unknown quantity to the physicians.

Since 1918 the number of food clinics in this country has increased steadily until at the present time there are 45. Clinics have also been established abroad. The number of patients that have been referred to the Boston Dispensary food clinic has increased from four in one week in 1918 to 1600 active patients with a record of 7500 visits during 1938.

Early in the history of this food clinic, certain hospitals in Boston affiliated with the Boston Dispensary in sending their student dietitians to the food clinic for a four week period to observe and study the methods used in dietary treatment for the ambulatory patient. Some of these students are now well-known administrative dietitians of hospitals where the food clinic has become a part of the dietary department. Others who came in the following years have organized food clinics on the basis of their experience at the Boston Dispensary, and are applying the theories and methods gained in their contact with the food clinic in various community endeavors.

As a result of the interest shown by dietitians in the development of the food clinic movement, the American Dietetic Association appointed a committee to study the organization of various food clinics in the country. As a result of its study the committee outlined a one year "Graduate Course for Students Training in Food Clinics" that is accredited to the professional training of the student. After careful consideration by the executive committee of the association it was accepted in 1935 and the course was first given at the Boston Dispensary in 1936.

Miss Stern is chief of the Food Clinic, Boston Dispensary, Boston.

Much of the preparation and training of the hospital dietitian and of the food clinic dietitian is basically the same, except that in the American Dietetic Association's list of requirements for training in the food clinic, greater emphasis is laid on sociology and education. In the food clinic, however, the dietitian treats only ambulatory patients, many of whom are busily at work and active in the life of the family and community. They are not passive individuals, detached from the family. Most of the conditions and diseases that require diet therapy are treated in the food clinic, but the approach is quite different from that of the hospital. The food clinic patient must become responsible for carrying out dietary directions at home between visits to the clinic.

A special type of training is necessary in the year of graduate work to enable the student to understand the influence of environmental conditions on dietary habits and to adjust diet therapy accordingly. Each patient is treated and taught individually in the food clinic at Boston Dispensary. An important part of the record is the nutritional history, a printed outline on which the dietitian during individual conferences with the patient gathers data concerning his present life situation and the experiences, physical and mental, that have conditioned him. The data so obtained need not follow the sequence specified in the printed outline but may be set down according to the response, interest and attitude of the patient as the conference or interview proceeds.

From these data and in the course of the friendly interchange with the patient in the food clinic, the student learns through practice to evaluate the social, economic, racial, religious and mental factors in the patient's environment and to plan the dietary regimen in accordance with these findings. If the patient requires the help of the social service department the student studies his needs with the social worker and makes out a budget for the worker's guidance. If more facts are desired than the dietitian can obtain, the social worker visits the family and renders invaluable aid to the dietitian through her report of the assets and liabilities of the patient's background.

This experience in the food clinic, day in and day out, in studying the effects of strain and pressure in the patients' lives prepares the student for the month she spends in the social service department in intensive case work study under the guidance of a medical social worker.

The student in the Boston Dispensary food clinic is in touch with the psychiatrists and social workers in the special clinics that the patients attend and develops an awareness concerning her patient's mental prob-

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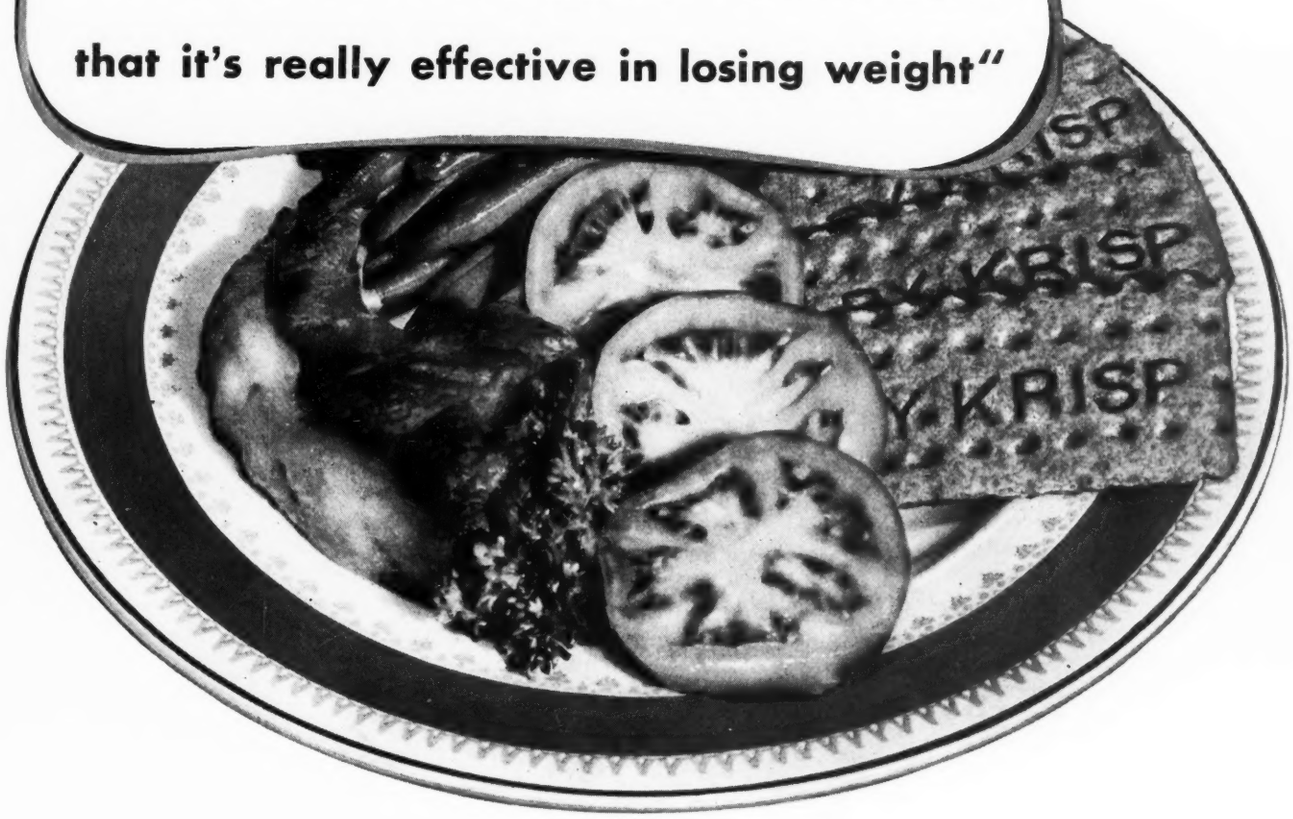

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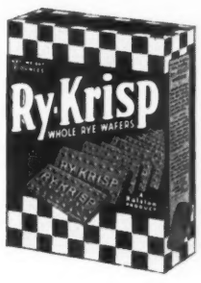

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lems. To intensify this study of the patient from the psychiatric point of view and to be able better to apply in dietary treatment her knowledge and understanding of his mental attitudes, the student spends one month of the training period in observation and study at the Judge Baker Child Guidance Clinic. This is always an illuminating experience to the student, since she relates emotional disturbances to food therapy and learns to take into account the patient's mental as well as physical needs in the practice of applied dietetics. Moreover, this period of training has resulted in a closer relationship between the psychiatric social worker and the dietitian.

The food clinic is increasingly recognized and referred to as one of the organizations contributing to the public health movement. The food clinic of the Boston Dispensary is fortunate in that its staff members are associated with various extramural nutrition projects: the health education department of the Y.W.C.A., the food clinic and health education department of the Burroughs Newsboys' Foundation, the nutrition and health education department of Lincoln House, a social settlement, and the direction of diets in various summer camps. The clinic student participates in these projects and gains a deeper understanding of the special economic problems of the community. She also participates in the mothers' meetings held at the dispensary for patients and for the people of the neighborhood.

Education of Patients

The fulfillment of the diet plan depends to a great extent upon the successful education of the patient in the principles underlying his diet. In the food clinic the patient should acquire information that will enable him to carry out his diet intelligently and faithfully at home. During the period of training the student in the Boston Dispensary food clinic learns, under the guidance of the dietitians, to follow procedures and methods for the education of the patient on the normal diet and on the therapeutic diet. The manner and extent to which she will use this material depend upon the patient's intelligence level, the definition of what is desired for accomplishment in his behalf, and the time that can be devoted to instruction by the dietitian and by the patient.

The student learns the value of illustrative material in teaching, *i.e.* pictures, photographs, charts, exhibits, food models, lists of foods and food values and other materials. She also learns from her surroundings in the food clinic the helpfulness of a cultural environment wherein things of interest and beauty reflect friendliness and sympathy, suggesting to the patient that the dietitian is aware of his background and customs and interests.

While guiding the patient's dietary treatment the student in the food clinic finds that she has constant need to teach and to apply educational principles and methods. She spends a month in the health education department of the Boston Dispensary observing and participating in the activities of the health educator. From her experience in the food clinic she is in some measure ready to teach, under the guidance of the health educator, the value of the food constituents to groups of child patients in the clinic waiting rooms. She has opportunity for this practice each morning, except on Saturday when she assists one of the professionally trained teachers who take regular part in the health education program. She uses as her guide material developed in the book "Food and Your Body: Talks with Children," published by the Massachusetts Department of Public Health, but she also develops original lesson material to present to these groups. An extension of the teaching of individual patients is the setting up of exhibits designed by the health educators and the creating of original exhibits under guidance. What she gains from her contact with the health education department is directly applicable in teaching the patient in the food clinic and groups in the community.

The student in the food clinic must be able to read carefully and interpret the medical record (containing the history, physical examination and laboratory findings) if she is to carry out intelligently the doctor's food prescription, which is also written on the record, and if she is to be able to explain to the patient the reasons underlying his diet plan so that he can carry it out more understandingly. The student in the food clinic course is an integral member of the group of students in the hospitals who attend the medical lectures for student dietitians given at the various hospitals. She also attends the morning medical conferences given for physicians and medical students by physicians of the New England Medical Center, staff members of the Boston Dispensary, the Pratt Diagnostic Hospital, the Floating Hospital and other medical institutions.

Training in Hospital

A period of two months of the student's training time is given to dietetic service in the hospital for experience in the special diet kitchen and in ward teaching and for an understanding of administrative problems. The administrative and therapeutic dietitians of the hospital plan the course with required readings.

This reciprocal relationship is of advantage to physician, student dietitian and patient, since the patient is often treated in the food clinic before and after treatment in the hospital. Under these circumstances the diet is well integrated, because the food prescription in the hospital is based on the one used in the out-patient department and the discharge diet from the hospital is fulfilled in the food clinic.

Readings in various journals and other literature in the field of medicine, conferences with the physician for information on special problems and attendance at various clinics all help the student to verify her diet therapy practice. The close relationship of the general medical department and special clinics to the food clinic gives her valuable opportunity to widen her medical knowledge.

With understanding of the nutritional problems of her patients from the medical, socio-economic and mental angles, the student feels that she is using her abilities to their greatest extent in serving the purpose of the food clinic, which is to assist the physician in carrying out food treatment as a part of medical treatment for the ambulatory patient.

CANNED FOODS AS PROTEIN SOURCES

● The primary function of protein in foods is that of a building material essential for tissue growth and maintenance. In 1897, Rubner postulated that all proteins are not of equal value in nutrition (1). Since that time, considerable attention has been directed towards the establishment of the types and amounts of protein required by man.

Chemical and biological investigations have demonstrated that different proteins may vary widely in both chemical composition (2) and ability to satisfy the nitrogen requirements (1, 3) of various animals. Of the twenty-odd amino acids which have been isolated from proteins (4) arginine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine have been shown to be essential in mammalian nutrition. The biological value of a protein is in reality a measure of its ability to supply those amino acids essential for tissue building and repair which the animal cannot synthesize (5) from material "ordinarily available" at a rate sufficient to meet body demands. A "complete" protein is one which will supply—or at least contains—the essential amino acids. Few proteins approach this ideal condition. Fortunately, however, a varied diet, containing proteins of both vegetable and animal origin, will usually supply all the essential amino acids which may not be supplied in adequate amounts by any one of the proteins.

As to the amounts of protein needed by men, experiments of the balance sheet or endogenous nitrogen elimination types (3, 6) have demonstrated that the protein requirements of the human adult may apparently be adequately met by relatively low protein intakes. These intakes are of the order of 0.5 gram per day per kilogram of body weight. However, there is evidence (3) that development of physique and general health is favored by more liberal protein intake. Since excess of protein above the requirement for tissue repair and growth is utilized as a source of fuel, the present trend is toward more liberal protein allowances.

In infancy and childhood, suggested protein allowances (3) are relatively high, being of the order of 3 to 4 grams of protein per kilogram of body weight in infancy and gradually decreasing with increasing age until adult allowances (3, 6) of 0.75 to 1.5 grams protein per kilogram of body weight are reached. Protein allowances of the order of 10 to 15 per cent of total calories as protein calories in the mixed diet throughout the entire life cycle, appear to be satisfactory. In the formulating of a mixed diet calculated to supply optimal amounts of proteins, the canned meats, marine, dairy and vegetable products may be freely used.

During recent years, popular interest has been concerned chiefly with the more recently discovered essential food factors such as the vitamins. However, the modern concept of adequate nutrition teaches that the optimum diet should be complete with respect to all known dietary essentials, protein, of course, included. In the attainment of this objective, the hundreds of commercially canned foods of animal and vegetable origin should prove both economical and valuable as protein sources.

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(1) 1935. Nutrition Abstracts and Reviews, 4, 447
(2) 1929. The Biochemistry of the Amino Acids, H. H. Mitchell and T. S. Hamilton, Chemical Catalog Company, New York.
(3) 1937. Nutrition Abstracts and Reviews, 7, 257.
(4) 1937. J. Am. Med. Assn. 109, 2070.
(5) 1938. Annual Review Biochemistry, 7, 356.
(6) 1938. Chemistry of Food and Nutrition, Fifth Edition, H. C. Sherman, Macmillan Co., New York.

We want to make this series valuable to you, so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles. This is the forty-ninth in a series, which summarize, for your convenience, the conclusions about canned foods reached by authorities in nutritional research.

The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Council on Foods of the American Medical Association.

Bananas on the Menu

DOROTHY De HART

BECAUSE of the advancement in our knowledge of nutrition, more of the hospital's food dollar is being spent for fruits and vegetables. Of the numerous varieties of fruits, the banana has become increasingly popular, especially with those institutions that buy it in what may properly be called "the modern manner." Just what is this "modern manner" and what are its advantages? Let us explore the subject a little since it is of considerable interest to hospitals all over the country regardless of their size.

In the first place, when selecting foods for hospital patients and staff the primary factors that must always be considered are: (a) food value in relation to body needs; (b) cost in relation to food value; (c) time and effort required to obtain and prepare the food; (d) availability; (e) palatability, and (f) digestibility. When this yardstick is applied to bananas it will be found that they measure up remarkably well.

Because of improved merchandising methods the hospital dietitian, in most localities, can now purchase bananas cut off the stalk in hands (clusters) and carefully packed in boxes. By this modern method of purchase she is better able to obtain the desired quantity of fruit for delivery on a specified date, at a specified stage of ripeness and with better assurance that the entire quantity can be used on the day or days planned. All she needs to do is to determine the quantity of bananas required, place her order for delivery from two to five days in advance of use and, after the fruit has been received, keep it in the boxes at normal room temperature to arrive at the full stage of ripeness.

The fruit will be delivered partially ripe, packed either in wooden boxes, which are returnable, or in fiber boxes.

A box of bananas usually contains 40 pounds of fruit, net weight (eight "hands" more or less, depending on whether large or small bananas are ordered, with a few loose fingers to make up the weight). This is the equivalent of from 100 to 120 bananas.

The advantages of buying boxed hands of bananas are:

1. All the fruit is of relatively uniform size, enabling more accurate planning of quantity for serving.
2. All the fruit is of relatively uniform ripeness.
3. The clusters are convenient to handle and there is no stalk to hang or to dispose of when the fruit is used.
4. The fruit is delivered relatively free from bruises because the boxes are well padded.
5. It is packed to prevent chilling in cold weather.
6. There is a uniform quantity per box.
7. The method is economical since there is no waste, such as stalk.
8. It permits of a more dependable and satisfactory use of bananas.
9. Boxed bananas cost no more than bananas by the bunch.

There are two simple ways in which the hospital must cooperate. First, bananas should be ordered for delivery from two to five days in advance of actual use, since it is the wholesalers' practice to receive and fill orders for bananas when the degree of ripeness is specified, either as "turning fruit," *i.e.* still showing a partly green color and green tip, or as "hard fruit," *i.e.* full yellow color, or with only slightly green tip.

Second, bananas should never be put into a cold chamber because low temperatures prevent the proper ripening of this delicate fruit; they

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Typical of today's trend is the example of a state hospital with more than 2,500 patients, where the superintendent reports, "We changed to modern GAS ranges, to improve the diet. Our figures show we also got a fuel saving of better than $200 a month."

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should be stored in a convenient room in which the temperature is from 65 to 70° F. Each box should be opened when it is received and the ripeness of the fruit noted. This is necessary because the particular stage of ripeness determines the length of time the fruit must remain in the box at room temperature in order to become completely ripe.

In hot weather, bananas should receive somewhat different treatment. As soon as they reach the hospital they should be put into a cool (but not cold) place, such as the basement. If wooden boxes are used, the lid should be promptly removed, the fruit taken out and all packing material placed at the bottom of the box. The fruit should then be placed on top and the lid left off the box. This arrangement permits of the necessary circulation of air to prevent the fruit from becoming prematurely soft. The same practice should be followed when cartons are used instead of wooden boxes, except that the flaps of the cartons should be bent back or torn off.

In the hospital the banana has found many uses as a food. For the special diet there seems to be almost no limit to its uses. It is valuable for its high carbohydrate content when concentrated sugars are needed. As an item on the regular menu it has unlimited possibilities. It is served as a breakfast fruit, as a main dish—cooked or fresh—and as a beverage or dessert.

When tipped with green the banana is partially ripe. At this stage the pulp is firm, somewhat starchy and slightly tart; it is then just ripe enough to cook and serve as a vegetable, either baked, broiled or fried. When it is all yellow it is ready to eat or cook in waffles, bread, muffins, pies, cakes and puddings. When flecked with brown it is fully ripe and best for flavor and nutrition. Then it is right for fruit cups, salads, desserts and drinks.

Ripe bananas are a natural, soft, bland food, nourishing and easily digested, as well as mildly laxative and nonirritating to the intestinal tract. By virtue of their vitamin and mineral content (they are good sources of vitamins A, B, C and G and contain important minerals including calcium, copper, iron and phosphorus), bananas belong in the group of so-called "protective foods." Research is constantly showing new ways in which this fruit can aid the physician in promoting good nutrition and in combating definite types of nutritional disorders.

As a matter of fact, the nutritive value of the banana is common knowledge among hospital dietitians and the only thing that has prevented a more widespread use of this delicious fruit in the past has been the difficulty in obtaining it at the proper stage of ripeness. This difficulty has been practically eliminated with the introduction of boxed bananas. Today, our old friend in its modern setting is taking its rightful place as one of the most valuable food additions to hospital menus for both patients and staff.

FOOD FOR THOUGHT

• Fresh fruits in season, ice cream and sherberts are the desserts that have the greatest appeal to patients in the summer season, according to Louise L. Schwartz, head dietitian, Hospital of the Good Shepherd, Syracuse University, Syracuse, N. Y. Miss Schwartz varies her salads by using fruits and vegetables in season, singly or combined, gelatin salads and a meat or fish salad served as a main course. She pays particular attention to color, either in the garnishing or in the salad itself. French dressing and mayonnaise are the most popular dressings at Good Shepherd.

• Incidentally, Miss Schwartz is receiving all sorts of compliments on the chocolate drink she serves. She is kind enough to permit us to pass along the recipe:

1 cup cocoa
1 cup sugar
5 tbsp. malted milk
1½ cups milk
4 squares butter (4 tsp.)
2 eggs
2 tsp. vanilla

Mix dry ingredients thoroughly, add milk. Cook for ten minutes. Add butter. Remove from fire, add well-beaten eggs and vanilla. Serve in milk.

• Speaking of salads, Lillian Hack, dietitian at St. Christopher's Hospital for Children in Philadelphia, has some good suggestions. Some of the more popular salads served here will be described, but, first, it must be explained that for self-service she uses a red and white enameled wooden salad bowl, fork and spoon. This is just the proper setting for her "Tossed-Up Salad" of mixed greens (escarole, chicory, raw spinach and chives). Raw cauliflower, radishes or avocado may be added; shredded red cabbage adds color to an all-green salad. This is especially popular with Roquefort dressing. Mixed raw vegetable salad is equally attractive in the bowl. Miss Hack uses celery, carrots, tomatoes, cabbage, cucumbers with a French dressing. Garlic allowed to stand in the dressing adds to the flavor. Fresh fruit salads always go well, she finds, especially fresh pineapple and apple matches with whole strawberries garnished with watercress. With this she uses a salad dressing made of cream, eggs, lemon juice and vinegar (slightly sweet preferred). Cantaloupe, honeydew and watermelon ball salad is also colorful and appetizing in the summer, she reports.

A more substantial type of salad is tomatoes stuffed with a cottage cheese mixture and served with Thousand Island dressing. The cottage cheese may be mixed with chopped or shredded carrots, peppers, celery or tomatoes. Chives, onion or onion salt may be added for flavor. It is then moistened with mayonnaise. A mixture made of chopped canned corned beef, celery, pickles and eggs moistened with mayonnaise is another good stuffing for tomatoes. For garnishes for all her salads, Miss Hack uses cherries, lettuce leaves with damp edges rubbed through paprika, cress, stuffed olives, pepper, pimiento and grapes.

• In the Methodist Hospital, Memphis, Tenn., Florence G. Love reports success with such salads as butterfly, porcupine, Santa Claus, Lady Windermere and filled peach. She, too, believes that the salad must be dressed up to be attractive. To provide just the right effect, therefore, she uses cream cheese balls, parsley, nuts, green and red cherries, pimiento, radish roses, sweet pepper rings, cucumber slices, cranberry jelly, dates and marshmallows and toasted coconut. Incidentally, Miss Love looks to Mr. Shircliffe's salad book for unusual suggestions.

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• Some cooking utensils are like old-fashioned bathers. Slow starters. Poor finishers. Others, made of Aluminum, strike right out and really "turn on the heat". What kind do you have? Check your equipment and replace inefficient utensils with "Wear-Ever" because . . .

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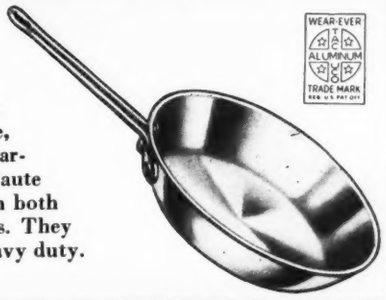

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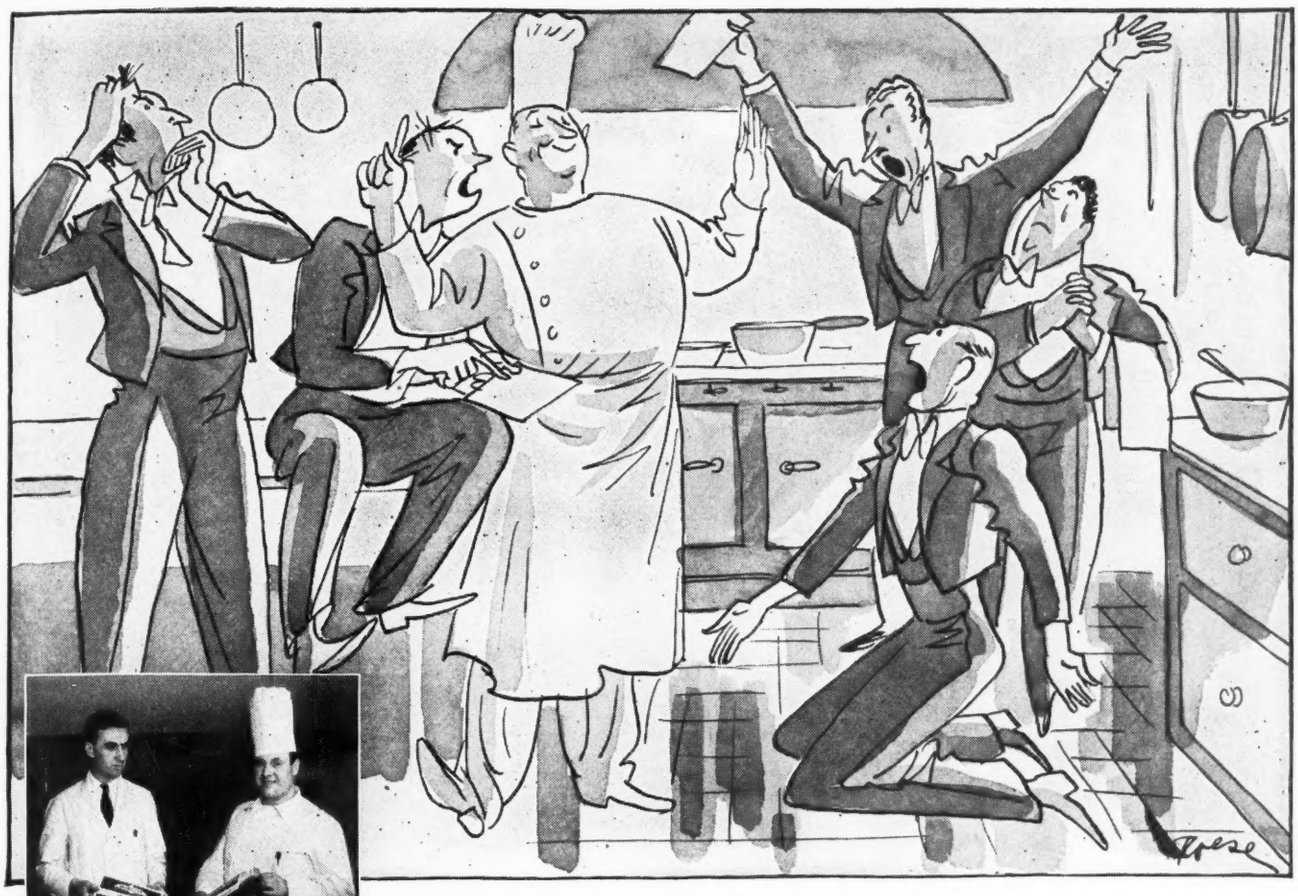
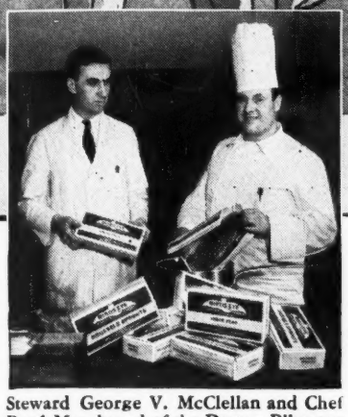
August Menus for the Small Hospital

Eleanor McCarthy
Dietitian, Jennings Hospital, Detroit

	Breakfast		Luncheon				
Day	Fruit	Main Dish	Soup or Appetizer	Main Dish	Potatoes or Substitute	Vegetable or Salad	Dessert
1.	Orange Juice	Poached Egg	Cream of Asparagus Soup	Grilled Cheese and Bacon Sandwich		Chef Salad	Date Torte
2.	Cantaloupe	Sweet Rolls	Cream of Potato Soup	Grilled Ham	Cauliflower, Hollandaise Sauce	Orange and Grape Salad	Baked Stuffed Apple
3.	Stewed Prunes	Scrambled Eggs	Fruit Juice	Chicken Roll With Gravy	Cucumber Slices	Tomato Salad	Lemon Chiffon Pudding
4.	Grapefruit Juice	Soft Boiled Egg	Cream of Spinach Soup	French Fried Scallops	Buttered Broccoli	Stuffed Celery Hearts	Baked Custard
5.	Applesauce	Bacon	Tomato Juice	Chop Suey With Rice		Pineapple, Celery and Nut Salad	Orange Cake
6.	Banana	Canadian Bacon	Consommé With Rice	Escalloped Corn, Buttered String Beans, Harvard Beets		Deviled Egg Salad	Oatmeal-Date Cookies
7.	Pineapple Juice	Blueberry Muffins	Cream of Celery Soup	Toasted Mince-Meat Sandwich		Head Lettuce Salad, Ripe Olives	Peach Shortcake
8.	Tomato Juice	Breakfast Sausages	Barley Soup	Cheese Soufflé, Currant Jelly		Asparagus and Pimiento Salad	Blackberry Cobbler
9.	Apricots	Poached Egg	Melon Cocktail	Creamed Peas and Mushrooms in Patty Shell		Stuffed Tomato Salad	Fudge Bar
10.	½ Grapefruit	Bacon	Cream of Asparagus Soup	Baked Acorn Squash With Sausages		Cabbage, Pineapple and Marshmallow Salad	Gingerbread
11.	Orange Juice	French Toast With Syrup	Grape Juice Cocktail	Toasted Egg Salad Sandwich		Texas Salad, Celery Hearts	Tapioca Pudding
12.	Stewed Figs	Soft Boiled Egg	Fruit Juice	Salmon Croquettes, Parsley Sauce		Peach and Cottage Cheese Salad, Gerkins	Cherry-Nut Ice Cream
13.	Baked Apple	Pecan Rolls	Split Pea Soup	Ham Timbales	Buttered String Beans	Celery Curls, Chili Sauce	Snow Pudding With Soft Custard
14.	Melon	Peameal, Bacon	Cream of Potato Soup	Tomato Sandwich, Cheese Sauce		Cucumber Salad	Dutch Apple Cake, Lemon Sauce
15.	Orange Slices	Coddled Egg	Sunshine Appetizer	Lobster Salad	Potato Chips	Stuffed Olives and and Radishes	Rice Pudding With Raisins
16.	Plums	Bacon	Cream of Corn Soup	Baked Noodles With Chicken		Orange and Grapefruit Salad	Chocolate Cookies
17.	Grapefruit Juice	Poached Egg	Consommé	Cold Cuts	Potato Salad	Sliced Tomatoes and Olives	Blueberry Cobbler
18.	Royal Anne Cherries	Scrambled Eggs	Cream of Asparagus Soup	Shrimp à la Newburg		Perfection Salad	Floating Island
19.	Banana	Grilled Ham	Tomato Bouillon	Fluffy Omelet With Currant Jelly		Pear and Cream Cheese Salad	Fruit Gelatin With Whipped Cream
20.	Pear	Sweet Rolls	Cream of Celery Soup	Toasted Olive-Nut Sandwich		Stuffed Cinnamon Apple Salad	Peach Compote
21.	½ Grapefruit	Breakfast Sausage	Barley Soup	Creamed Dried Beef on Toast		Fruit Salad, Celery Hearts	Ice Box Cookies
22.	Pineapple Juice	French Toast With Syrup	Tomato Juice	Baked Potato, Lima Beans, Braised Carrots		Banana-Peanut Butter Salad	Cantaloupe
23.	Orange Juice	Soft Boiled Egg	Cream of Spinach Soup	Chicken Timbale, Parsley Sauce		Chef Salad	Brownies
24.	Apricots	Bacon	Vegetable Soup	Asparagus Tips, Cheese Sauce		Cabbage and Pineapple Salad, Radish Roses	Caramel Custard
25.	Diced Melon	Poached Egg	Fruit Juice	Creamed Peas and Tunafish in Patty Shell		Grapefruit and Cheese Salad	Date Bar
26.	Baked Apple	Scones	Split Pea Soup	Grilled Ham With Pineapple Rings	Spinach Supreme	Celery Curls	Rhubarb Brown Betty
27.	Orange Sections	Peameal, Bacon	Cream of Mushroom Soup	Toasted Egg Salad Sandwich	Pickled Beets	Gingerale Salad	Applesauce Cake
28.	Pear	Omelet	Cream of Celery Soup	Jellied Veal Loaf	Potato Chips	Julienne Salad, Radishes	Cream Puff
29.	Tomato Juice	Bacon	Grapefruit Juice-Gingerale Cocktail	Baked Macaroni and Cheese		Cabbage and Apple Salad, Chili Sauce	Lemon Snow Pudding
30.	Stewed Figs	Scrambled Eggs	Jellied Consommé	Chicken Club Sandwich		Endive, Roquefort Dressing, Stuffed Olives, Celery Hearts	Orange Sherbet
31.	Plums	Broiled Ham	Creamed Potatoes	Crabmeat Salad With Sliced Tomatoes			Fresh Fruitcup, Chocolate Wafer

Recipes will be supplied on request by The Modern Hospital, Chicago. Space precludes listing of cereals, several varieties of which are always offered for breakfast.





Steward George V. McClellan and Chef René Montbrand of the Dayton Biltmore heartily recommend Birds Eye Frosted Foods.

Meeting a Kitchen Crisis
FACE TO FACE!

EVER meet a kitchen crisis face to face?

If you haven't, knock on everything that's handy. Because, sure as winter's coming, so is a day when things go wrong.

Like the time 200 extra guests walked in on Chef René Montbrand of the Dayton Biltmore a few minutes before sitting-down time. But let's hear how he tells it:

> "Many thanks to Birds Eye Peas...Once, just before starting to serve a large banquet, an overflow of 200 people had to be taken care of. The menu featured new green peas. The 200 extra guests likewise had to have peas. And time would not permit me to prepare new green peas. Birds Eye Peas solved the problem."

Ease and speed of handling may have sold Chef Montbrand on Birds Eye . . . but quality *kept* him sold! His letter continues:

> "Since that time I favor Birds Eye Vegetables in place of fresh vegetables. There's no delay in cooking...can't tell any difference in color and flavor...and they cook evenly, being uniform in size and of the same quality. Furthermore, they are economical because no extra help is needed for shelling, trimming, or cleaning. They are not wasteful at all in cooking and yield more portions for a better percentage.
>
> "At the Dayton Biltmore Hotel, Birds Eye Fruits and Vegetables are featured daily on the menus and are very much complimented by our guests."

That's about all there is to say. Except to add that if *you* don't already use Birds Eye Frosted Foods, you ought to get in a few varieties just to try. There are more than 30 different fruits and vegetables. All come washed, cleaned, ready to cook or serve. All are perfect!

For Your July Menus, Feature

BIRDS EYE PEAS

à la Menthe

suggested by Chef René Montbrand of the Dayton Biltmore.

Ingredients: 1 40-oz. package Birds Eye Peas —½ lb. sweet butter—1 bunch fresh mint

Cook Birds Eye Peas according to package directions, but when doing so add to the water a bunch of fresh mint. When the peas are tender, remove mint and drain the water. Then gently roll peas in melted butter. Season to taste and serve with a few fresh mint leaves. Serves 20.

BIRDS EYE
FROSTED FOODS

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250 Park Avenue, New York City

Pharmacy in a State Hospital

CLEMENT RIEDESEL

An accurate check must be made of the supplies in a state hospital pharmacy so that stocks will not be depleted before the new supplies arrive.

IT WAS with some trepidation that I undertook to run the pharmacy in a state hospital where previously there had been no regular pharmacist. Up until this time I had been engaged in the entirely ethical pursuit of selling radios and washing machines in a metropolitan drug store. However, after the initial timidity wore off I was glad I had entered upon this strictly professional phase of my career.

The pharmacy at Norfolk State Hospital, Norfolk, Neb., is located centrally to all the wards and the duties of the pharmacist consist chiefly in manufacturing many stock preparations and in keeping an adequate supply of other materials on hand. One of the greatest difficulties at first was learning how to gauge our orders correctly. Because it is a state institution, all supplies are purchased by bid. An order is made out the first of every month with the approximate cost of the items required. This order goes to the state board of control, where it is opened for bid. Usually about six weeks elapse between the time the order is sent in and the first merchandise is received. This necessitates a careful checking of all supplies, and estimating as correctly as possible how long each item will last. Under such a system a larger invoice is carried than one would otherwise desire; this is not, however, an insurmountable obstacle to a smoothly functioning pharmacy.

The receiving wards use the greatest variety of medication and, when an extreme emergency arises, the superintendent can make local purchases. The remaining wards use varying amounts of standard items, the greatest percentage being in the form of sedatives, including barbiturates, bromides and narcotics.

In addition to maintaining a supply of all medicants used, it is the pharmacist's duty to order hospital supplies, such as hypodermic syringes, needles, surgical supplies, tooth brushes, basins and hot water bottles. Since these do not deteriorate as a rule, a fairly good stock can safely be carried.

A state hospital furnishes one of the greatest incentives to a pharmacist to acquire and retain professional skill in compounding pharmaceuticals. No matter how careful he is, there are times when the supply of certain products runs low before a new order arrives and this affords ample opportunity to use his knowledge of drugs. Such items as liniments, ointments, cough syrups, deodorant powders, digestive powders, tooth powder, cold remedy capsules, elixir of bromides, mouth washes and possibly a few others are manufactured in the pharmacy. The pharmacy is also equipped to manufacture some of the intravenous and subcutaneous solutions used in the hospital.

In the matter of narcotics, a simple yet efficient system has been developed. In addition to the perpetual inventory kept in the pharmacy and the daily narcotic record kept on the wards, a frequent check is made of all narcotics on the wards. Narcotics are issued only by a separate requisition blank signed by the nurse in charge of the ward; the narcotic supply must then be counted and signed for by the same nurse. Thus, it is possible to make a check on the entire hospital at a moment's notice.

The author is the pharmacist at Norfolk State Hospital, Norfolk, Neb.

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Broader Fields for Pharmacists

PAUL J. THOMAS

IN LARGE hospitals one or more pharmacists must devote full time to the pharmacy but in mental and tuberculosis hospitals and in the smaller general hospitals even one pharmacist will have some spare time. It is natural for him to be requested to help in the x-ray or the clinical laboratory, since the work is somewhat similar and since those departments are often located near the pharmacy.

This combination of duties will probably become increasingly common for the following reasons: (1) the use of drugs is becoming more scientific and standardized; (2) the methods of hospital manufacture and dispensing are becoming easier; (3) pharmaceutical preparations can be obtained from drug houses at reasonable prices; (4) the number of hospital beds is increasing but the number of individual prescriptions filled in hospital pharmacies is decreasing, and (5) more small hospitals are being induced to employ full-time pharmacists.

By "scientific" I mean intelligent and accurate use. Drugs that cannot prove their value in careful tests are being dropped by the wayside of medical progress and are being supplanted by newer and more effective ones. Even our few drug specifics, such as arsphenamine and quinine, are being improved or replaced, and old and trusted germicides are losing favor in competition with newer and better ones.

Along with the more scientific use of drugs will come the increasing use of only the best for each medical purpose, according to the recommendation of technical committees of doctors and pharmacists. There can be only one best available drug for any given condition of the body and to find which are the better drugs is the constant goal of many research workers in college and commercial pharmacological laboratories. The trend in hospital practice is definitely away from a multiplicity of drugs and toward a more limited number of proved remedies. Furthermore, the use of drugs for human ailments is being supplemented by a greater use of electricity, heat, light, water, diet, exercise, radium and x-rays as therapeutic agents.

Mr. Thomas is pharmacist at the Veterans' Administration Hospital, St. Cloud, Minn.

It is the author's opinion that colleges of pharmacy should offer an optional condensed course in x-ray and clinical laboratory technic for senior students who plan to specialize in hospital pharmacy work

Methods of manufacture and dispensing of medicines are becoming simpler and easier. Machinery does the work that was formerly done by hand and equipment is more convenient. Many drugs and preparations can be purchased from reliable concerns for less than the cost of their manufacture on a small scale. More hospitals are adopting drug formularies or lists of available medicines. This means that the work of the hospital pharmacist has been considerably simplified and reduced by the elimination of many special prescriptions and by the reliance ordinarily put upon the medicines stocked on each ward.

At first thought it is a little disconcerting to the prospective hospital pharmacist to know that he may also have to do x-ray or clinical laboratory work. On the other hand this may serve to induce all hospitals, no matter how small they are, to employ a pharmacist as has been recommended by the American Hospital Association.

At present many small hospitals and clinics employ a technician who does both the x-ray and clinical laboratory work. Such training might well be included as an optional course in colleges of pharmacy so that pharmacy students who plan to work in hospitals will have a fair knowledge of those other subjects and thereby will increase their chances of obtaining employment in their chosen field. The pharmacist is particularly well fitted for such additional duties because of his required training in chemistry and bacteriology. At present no state licenses are required of x-ray and clinical laboratory technicians, although both groups have organizations that grant nonofficial recognition and certificates of ability to those technicians who can qualify. It is probable that in the future they also will be given official examinations and licenses by the state governments. To be able to perform these additional duties certainly should not detract from a pharmacist's prestige.

Clinical laboratory technicians make standard tests on specimens of urine, blood, sputum, feces, gastric contents, milk, spinal fluid, tissues and smears from the bodies of patients. Then there are such special tests as the determination of the basal metabolism rate and the taking of electrocardiograms. The technician need not know the theory and interpretation of all the tests that he makes on the specimens but it will add much interest to his work if he learns more about them than merely the manual technic.

• The pharmacy should be an information bureau for the entire hospital staff. Here the doctors, interns and nurses should be able to learn about new remedies that have appeared on the market. The pharmacist gets his information from medical magazines, the literature that is sent out by pharmaceutical houses and interviews with representatives of the manufacturers. The up-to-the-minute pharmacist must, of necessity, be a student in order to keep abreast of the times.—EDITH BLANCHE WILLIAMS, *pharmacist, Bryan Memorial Hospital, Lincoln, Neb.*

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NOTES AND ABSTRACTS

By Carl C. Pfeiffer, M.D., Department of Pharmacology
University of Chicago

Alkali Therapy in Peptic Ulcer

• Prolonged Sippy regimen may lead to many complications that can be anticipated from the pharmacology involved. These complications are as follows:

1. Avitaminosis may result from the lack of a sufficiently balanced diet. While orange juice and cream may provide sufficient vitamin A, C and D, the diet may be deficient in B_1, nicotinic acid and vitamin K. It is important that the patient receive adequate amounts of vitamin K (green foods or commercial concentrates) in that he may also be suffering from a bleeding ulcer.

2. Hypochromic anemia may result directly from loss of blood and indirectly from the failure of the alkaline gastro-intestinal tract to absorb sufficient iron. The patient either must be given massive doses of iron salts or the treatment must be discontinued.

3. Alkalosis may present itself in the form of tetany, minor spasms, occipital headache or cramp-like joint and muscle pains. This syndrome is known to follow chronic pyloric obstruction, but the fact is not so well known that it may also develop without organic obstruction, according to Teghers and Lerner of Boston, if alkaline powders are given in the presence of impaired ability of the kidney to excrete basic ions. It seems probable that alkalosis can develop in normal individuals only if fluids are restricted or if renal function is impaired.

4. Nephrolithiasis may result from overzealous use of alkalis and the presence of kidney stones may impair excretion so as to cause alkalosis. The judicious use of alkaline salts is the best preventive of all of these complications. The nervous factor in peptic ulcer should not be overlooked and rest in bed should be aided by the use of a sedative, such as phenobarbital. Foci of infection should also be looked for and eradicated.

Aluminum Hydroxide Gels

• Because of the recent widespread use of aluminum hydroxide as a gastric antiacid, the work of Quigley, Einsel and Mischan of Cleveland is timely. They administered aluminum hydroxide gel in large doses to dogs (120 cc. daily) for from two to three months without any significant alteration of the physiology of the gastro-intestinal tract. These studies confirm the work of Ivy and his associates, who worked on normal human subjects and found that the Al $(OH)_3$ gel reduced the free acidity for forty-five minutes or more. There was marked variation in response, however, with a tendency to increased acidity in four of the six subjects after evacuation of the aluminum.

Emery and Rutherford of Boston report on the use of colloidal Al $(OH)_3$ in peptic ulcer. Twelve patients were treated in all, and the majority of the cases were of the severe type. Five were treated by the drip method and seven, by the oral method. Those patients who started on the drip method were shifted to the oral method after one week. A solution of 1 part of the aluminum hydroxide to 3 parts of water was used at all times. The amount used varied slightly, but on the average 15 drops per minute were allowed to drip through the tube. It was given orally in amounts of 60 cc. of the mixture per dose. A dose was given every hour from 8 a.m. to 9 p.m. In addition to the aluminum hydroxide, the patients were fed according to the schedule outlined by Sippy. All patients were relieved of pain caused by the ulcer within twenty-four hours and had no recurrence of pain while remaining on the treatment.

In addition to neutralizing the secreted acid, colloidal aluminum hydroxide decreases the titratable acidity of the gastric juice. Oral administration of the drug produces a somewhat slower decrease in the titratable acidity, which ultimately reaches the same general level. All patients who fail to respond satisfactorily to the Sippy regimen should be treated with aluminum hydroxide before surgical intervention is carried out. Colloidal aluminum hydroxide is also useful for treating ulcer patients who show a tendency to form renal calculi. The drug is absorbed only slightly.

Magnesium Trisilicate in Ulcer

• According to Mutch in England and to Tidmarsh and Baxter in Montreal, magnesium trisilicate is about equal to Al $(OH)_3$ gel in the neutralization of gastric hyperacidity. Mutch claims that its antiacid power is sustained for hours; that it has specific antipeptic powers; that it is strongly adsorbent; that because it is insoluble it is nontoxic, and that any excess is eliminated in the stool without causing diarrhea or constipation.

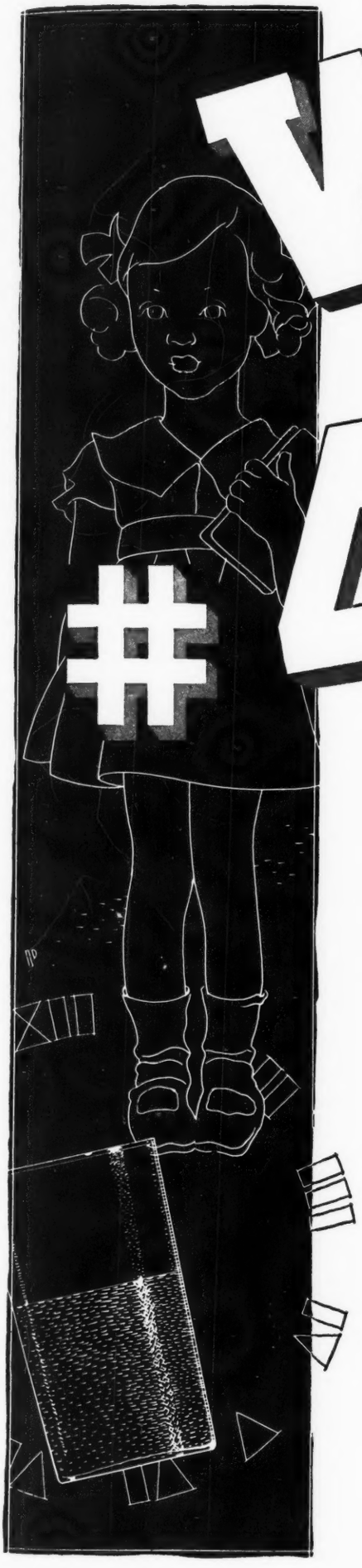
Tidmarsh and Baxter find that it causes diarrhea in 5 per cent of the patients when used in the usual dose of 2.25 gm. (gr. *xxxv*.). They found that it compares well with the regular antiacids in common use as far as neutralizing powers and relief of gastric symptoms are concerned. Further reports on the use of this substance will be awaited with interest.

Protection Against Sunburn

• Bachem and Fantus of the University of Illinois studied the protective properties against sunburn of several materials by spectroscopic examination and by cutaneous tests. The cream salve tested gave the best result. This is an emulsion produced by the addition of about 50 per cent of water to a mixture of 1 part of wool fat and 3 parts of petrolatum. Its particular value is, no doubt, explainable by diffusion, reflection and absorption phenomena. Of the insoluble powders studied, titanium dioxide is the most efficient in its protective value; calamine is next in order.

Because a sunburn protectant is applied to surfaces of the skin exposed to view, cosmetic quality of the preparation is essential. The authors, therefore, decided to take advantage of the cuticolor preparations developed by Fantus and Dyniewicz. Cuticolor titanium dioxide is made with titanium dioxide, which has been found to be the most efficient of the powders tested. To give this white powder a skin color, red ferric oxide (6 per cent) and yellow ferric oxide (8 per cent) are added. Rose water is employed to give it a pleasant odor.

Such volatile oils as bergamot, lime, lemon, orange and cologne have photosensitizing qualities and should be avoided in sun screens. The comparison of cuticolor ointment with various proprietary preparations on the market recommended for protection against sunburn shows that cuticolor ointment is superior to any of them, and a test exposure of an individual to actual sunburn shows that cuticolor ointment is indeed efficient in a practical test. Formulas for six sun screen preparations are listed, any one of which, the authors say, has been found superior to a number of proprietary sun protectants on the market.



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Monthly News Review

Vol. 53 July 1939 No. 1

Accrediting Program of National League of Nursing Education Begins on July 1

The committee on accrediting of the National League of Nursing Education has announced that following its twenty months of preliminary study, which has included during the past year a survey of 51 schools of nursing, it will accept on July 1 the applications of schools that wish to be considered for accreditation. The purposes of the committee in the accrediting of schools of nursing are as follows:

1. To stimulate the general improvement of nursing education and nursing practice in the United States.
2. To help those responsible for the administration of schools of nursing to improve their schools.
3. To give public recognition to schools that voluntarily seek and are deemed worthy of professional accreditation.
4. To publish a list of accredited schools for the guidance of prospective students.
5. To guide state boards of examiners of nurses in further defining their standards for recognition of schools.
6. To make available to institutions admitting nurses to advanced standing information that will help in evaluating credentials.
7. To provide information to lay and professional groups to develop an understanding of the ideals, objectives, and needs of nursing education.

The accrediting service is available to all schools of nursing that seek it voluntarily.

Two representatives of the accrediting committee will visit each school. Qualified workers must be obtained but definite arrangements can be made with them only when the number of schools to be visited is known. Therefore, the schools desirous of being included in the first accrediting are asked to file their applications between July 1 and December 31. Every effort will be made to send the visitors to the schools within a reasonable period of time and as prompt action as possible will then be taken by the committee. It is planned to publish the first list only after all schools in this first group have been visited and acted upon. Reports of findings and recommendations of the committee will be sent to each school.

Two consultants represent the American Hospital Association in the accrediting committee, namely, Dr. Nathaniel W. Faxon, Massachusetts General Hospital, Boston, and the Rev. John G. Martin, St. Barnabas Hospital, Newark, N. J.

A statement of the policies of the committee in considering eligibility is now being prepared and will be sent to schools in response to their first inquiry. This pamphlet will assist the schools in their self-evaluation and will guide them in determining their probable eligibility for accreditment. The schools that will be accredited at this time will be those offering basic curriculums in preparation for the professional practice of nursing. Limited accreditation will be open to affiliating schools offering courses of instruction in one or more clinical services.

If, after reading the statement of policy, the school makes definite application for accreditment, the official application form will be sent, accompanied by a questionnaire which asks for the major facts relating to the organization of the school. A small fee, sufficient to cover the cost of handling the application, will be requested when this application is filed.

Missouri Has New Nursing Law

The new Missouri Nurse Practice Act was signed by Governor Lloyd C. Stark on June 8 and will become effective ninety days after the adjournment of the Missouri state legislature. The provisions of the amended law include raising the educational requirements for entrance into nursing schools from one year of high school to high school graduation, and raising the requirement for taking state board examinations from graduation from a two year course in a school of nursing to a three year course in an accredited school. It also provides for an inspector and educational director who is to act as chief examiner in the preparation and grading of examination papers and to inspect schools of nursing.

Medical Society Survey Asks for Nonprofit Plan for Payment of Physicians

The supply of medical care in Cook County, Illinois, is sufficient to meet the active demand for all urgent requirements but many important needs exist if medical service is to meet "actual needs" rather than mere "active demand," according to a survey published last month by the Chicago Medical Society.

While endorsing the action of the American Medical Association in opposing the National Health Act and all forms of compulsory health insurance, the survey committee asked the Chicago Medical Society to request the Illinois State Medical Society to draft a nonprofit group insurance plan for the payment of physicians.

Among the hospital recommendations of the survey committee were the following: (1) administration of all governmental hospitals in Cook County, except state and federal institutions, by a single metropolitan hospital commission appointed by the city and the county; (2) a more widespread geographic distribution of hospital facilities throughout the entire county for the care of the medically indigent, using insofar as possible existing hospital and clinic facilities; (3) more subsidized beds for children and maternity patients and additional beds for colored patients, patients with active tuberculosis and for nervous and mental patients; (4) more facilities for the care of chronic and incurable patients and for convalescents; (5) higher standards in the 30 unapproved hospitals, and (6) compilation of better statistical and financial data from hospitals.

Dr. Herman L. Kretschmer was chairman of the committee on medical economics that conducted the survey. Dr. W. H. Walsh was director of study.

Goldwater Receives Honorary Degree

Dr. S. S. Goldwater, commissioner of the department of hospitals, New York City, was awarded the honorary degree of doctor of public health by New York University, which is his alma mater. The degree was bestowed on Doctor Goldwater in recognition of his services to the hospital field.

In the Treatment of Diabetes

ILETIN (INSULIN, LILLY), an aqueous solution of the antidiabetic principle, was the first preparation of Insulin commercially available in the United States. Years of research and experience in the manufacture of large lots of Iletin (Insulin, Lilly) assure its purity, stability, and uniform potency. Specify "Lilly."

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Hayhow and Coler Address Executive Housekeepers on Management of Personnel

"It becomes the specific duty of the department head to improve the education and performance of his or her personnel; to standardize procedures; to develop departmental personality; to reduce waste, accidents and turnover, and to foster loyalty, respect, confidence and morale."

Thus Edgar Hayhow, superintendent of Paterson General Hospital, Paterson, N. J., summed up the most important function of the executive housekeeper in his talk which was the high spot of "Hospital Day," the opening of the National Executive Housekeepers Association's sixth annual congress at Pittsburgh on Thursday, June 1.

Two dinners, one for the national board of directors and all chapter presidents, and the other for delegates, alternates and guests, were held on that evening, with special entertainment. Lillian Wright, St. John's Hospital, Brooklyn, N. Y., and Jessie L. Wilson, Memorial Hospital, Albany, N. Y., were in charge of the day's program.

On Friday, C. S. Coler, director of Industrial Relations, Westinghouse Electric & Mfg. Co., Pittsburgh, addressed the group on "Human Nature." Mr. Coler outlined the necessarily close relationship between work in the industrial and institutional fields and defined clearly the value of psychology and its major influence on human relationships. He emphasized the value of careful personal training of all employes, reiterating the need for close and confidential understanding between an executive and all members of his staff.

The group was entertained for luncheon at the Heinz plant and the afternoon was spent in sightseeing. Later in the afternoon, members of the Pittsburgh chapter were hostesses at a tea and cocktail party. Mrs. Grace H. Brigham of the Providence-Biltmore, Providence, R. I., was chairman of the day.

A feature of the morning session on Saturday, June 3, was the Waldorf-Astoria's housekeeping service film, sponsored by Lucius M. Boomer, president of the Waldorf. Anne Owens of the Sherry-Netherlands Hotel, New York, was the commentator. In the afternoon a color psycho-analysis was very interestingly presented by a representative of Devoe & Raynolds Company, Inc.

Twenty of the 27 chapters of the

(*Continued on page* 112)

New Memorial Hospital for Treatment of Cancer Is Opened in New York

A distinguished gathering of physicians, scientists and nurses attended the opening of the new $5,000,000 Memorial Hospital for the Treatment of Cancer and Allied Diseases in New York City. The new building is modern in design, having broad lower floors and a 12 story tower with set-backs that form open roof gardens for patients. It has a capacity of 168 beds with provision for future expansion.

The first floor is devoted to the main administration activities of the hospital and to the out-patient and x-ray departments. The laboratories are housed on the second floor; the third to tenth floors comprise the patients' accommodations, with 76 ward beds, 58 semi-private rooms and 34 private rooms.

Among the speakers on the opening day program was Dr. S. S. Goldwater, commissioner of hospitals, New York City, who traced the progress of public health work in the last fifty years.

The building is adjacent to New York Hospital and Cornell Medical College whose students will be able to do special work in cancer diagnosis and treatment in the new institution.

National Hospital for Speech Disorders Moves to New Home

The new seven story home of the National Hospital for Speech Disorders in New York City was opened and dedicated on June 15. The building, located at Irving Place and Eighteenth Street, is the gift of Lucius N. Littauer and was equipped by friends and former patients of the hospital.

The facilities of the new hospital include an auditorium for lectures and educational purposes, kindergarten rooms and special rooms for carrying on the group therapy in which it has pioneered. One floor is devoted to a complete medical unit and facilities for the treatment of pathologic voices.

Institute for Catholic Hospital Administrators Announced at Meeting

The formation of a Catholic Hospital conference of diocesan representatives and the announcement of the first institute in hospital administration to be offered exclusively for those in Catholic hospitals were two highlights of the meeting of the Catholic Hospital Association, held in Milwaukee from June 12 to 16.

The institute will be held at St. Louis University from July 5 to 29, inclusive, and will be open to administrators, department heads, health and welfare officers whose work brings them into contact with hospitals, teachers in schools of nursing and other Sisters who are planning to devote their lives to the field of hospital administration.

Among those who will lecture are the Rev. Alphonse M. Schwitalla, president of the Catholic Hospital Association; the Rev. John W. Barrett, Chicago; Ray Kneifl, executive secretary of the Catholic Hospital Association; the Rev. John J. Bingham, New York; the Rt. Rev. Mgr. Maurice F. Griffin, Cleveland, and a group of 18 conference leaders.

The resolutions authorized by the convention included condemnation of compulsory health insurance, a demand for protection of Catholic interests in nursing legislation, approval of maternity care in general hospitals when adequate safeguards are followed, a protest against inadequate moral safeguards in the present cancer and syphilis campaigns, endorsement of small hospitals as important factors in national health service and endorsement of the practice of withholding sedatives from dying patients until they have had an opportunity to confess and receive the last rites of the church.

Two entire sessions of the convention were devoted to hospital care insurance. A strong plea for making this a true form of social insurance was voiced by Ray F. McCarthy, executive director of Group Hospital Service, Inc., St. Louis. Mr. McCarthy urged that service be provided to rural areas and to low income groups. He expressed strong approval of the co-insurance principle whereby the subscriber pays part of the cost of hospital service. Under the St. Louis plan, approximately 80 per cent of the cost is met by the pooled funds and the remainder, by the subscriber.

The entire list of officers was re-elected by the convention. Father Schwitalla is president; Monsignor Griffin, first vice president; Father Barrett, second vice president; Rev. Joseph S. O'Connell, New York, third vice president; Sister Helen Jarrell, Chicago, secretary, and Mother M. Irene, St. Louis, treasurer.

NO. 7 OF A SERIES OF ADVERTISEMENTS SHOWING WHERE U.S.I. ALCOHOL IS USED IN HOSPITALS

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Hospital Leaders Disagree on Wagner Health Bill at Minnesota Meeting

Condemnation of the proposed Wagner National Health Act was voted by the Minnesota Hospital Association after hearing an address by Dr. Bert W. Caldwell in which he stated that everything in the act that hospitals desire is amply provided for in existing law. The Wagner bill, Doctor Caldwell declared, gives vast powers to inexperienced federal organizations and appropriates large sums of money "for purposes that we do not support." It contains no reference, he said, to the use of voluntary hospitals for the care of the indigent and threatens the very existence of these hospitals. He declared that it would result in the building of hospitals where they are not needed.

Quite a different point of view was put forth by Dr. Basil C. MacLean, administrator, Strong Memorial Hospital, Rochester, N. Y. Within five years there will be a government plan for the care of the indigent, Doctor MacLean predicted. "I don't fear that the voluntary hospital will be extinguished. The danger is that the voluntary hospital may try to extract the last cent from the government. It should remember in dealing with the government that the hospital's tax exemption imposes a social obligation upon it."

Doctor MacLean made a strong plea for the extension of hospital care insurance to include a larger proportion of the people, particularly those in the lower income levels and to include a wider service, especially medical care.

Doctor MacLean scored the Wagner health bill for its vagueness and its cost but pointed out that there is considerable good in the bill. "I hope hospitals and the medical profession will be more helpful and constructive in revising the Wagner health bill than business leaders were in revising the Wagner Labor Relations Act," he said. Younger physicians, he stated, see an inevitable change coming and would like to help mold it rather than "to attack all programs with demagogish pronouncements."

A new policy of the American College of Surgeons was announced by Dr. Malcolm T. MacEachern at the meeting. Hereafter, Doctor MacEachern said, the man who has surveyed a hospital for the college will be available at the conclusion of the survey for conferences with any groups in the hospital that desire such conferences. The trustees, the administrative staff and the medical staff may meet with the surveyor either separately or in a joint conference, if they so wish.

To put a hospital out in front with an outstanding program of education for interns and residents will not cost more than 15 or 25 cents per patient day, declared Dr. Robin C. Buerki, director of study of the Commission on Graduate Medical Education. This is a good investment in the future, he said, because the physicians who obtain their internships and residencies now will on the average be practicing in our hospitals for the next thirty-three years. "It is our fault if doctors practicing in our hospitals in the future do not do good work," he declared.

A. J. Stasel of Eitel Hospital, Minneapolis, was installed as president to succeed Dr. Peter Ward of Miller Hospital, St. Paul. Ray Amberg, University Hospitals, Minneapolis, was chosen president-elect. Arthur M. Calvin, Midway and Mounds Park Hospitals, St. Paul, is executive secretary.

TORONTO CALLING!

If you have an educational exhibit or a gadget that might be of interest at the International or American Hospital conventions to be held in Toronto in September, please advise P. L. Morrison, convenor, Educational Exhibits, 130 Dunn Avenue, Toronto, Canada.

New Jersey Medical Service Plan

A four cents a day plan for medical service is being prepared by the Medical Society of New Jersey and will soon be given a year's trial, according to information released at the recent annual meeting of the society. It is expected that the service will be limited to the lower income groups and will provide for free choice of physician. The society proposes to start the plan with a $5000 grant.

100 Attend Nursing Institute

The examining boards of seven states were represented at the three day institute on "Examinations and Other Methods of Evaluation" held at the College of St. Theresa, Winona, Minn., May 22 to 24. One hundred nurses attended the course.

University of Pittsburgh Will Open School of Nursing

The opening on September 1 of a school of nursing at the University of Pittsburgh has been announced by Chancellor John G. Bowman.

The new school is an outgrowth of nursing courses offered by the college and the school of education since 1936 and will take over the programs of the two schools. The new school will offer the degree of bachelor of science in nursing.

Students who combine the course leading to the degree with their nursing training in the hospitals may complete the work in five years and qualify for the degree and for a certificate as a registered nurse. Those who take their nursing training in hospitals first may complete the course required for a degree in three additional years.

Polish City to Erect Hospital

A large hospital and medical center covering 30 acres are to be erected in the Polish port of Gydnyia, according to the U. S. Department of Commerce. The hospital and medical center will cost $1,900,000 and will include eye, ear, nose and throat, x-ray, surgical, and internal medicine departments.

County Infirmary Dispute Settled

Settlement of a dispute revolving around the Suffolk County infirmary at Yaphank, N. Y., was announced last month by the county welfare commission and the county medical society. The welfare commission agreed to use the infirmary for chronic or long-term cases only and to admit no cases except those referred by the medical society's advisory committee or the attending physician until such time as plans are worked out for organizing legally the infirmary as a county hospital. In return, the physicians agreed to a scaled-down fee schedule for their treatments of indigent patients and to a reviewing committee of physicians to go over the bills submitted.

Court Gives $80,000 to City Hospital

The decision of the Court of Common Pleas that the City Hospital, Cleveland, is entitled to use the $80,000 trust fund left to it under the will of the late John Colohan assured the construction of a new accident emergency unit for the hospital and ended litigation over the will that started in 1911. Mr. Colohan's will gave property to the city with the provision that a hospital should be constructed on the site.

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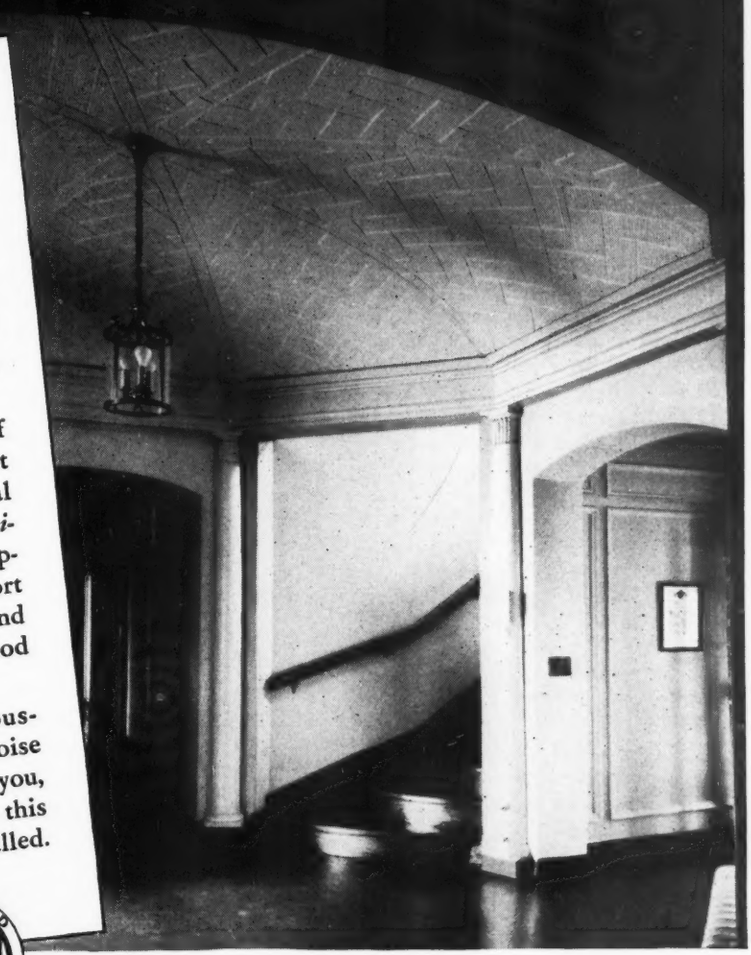

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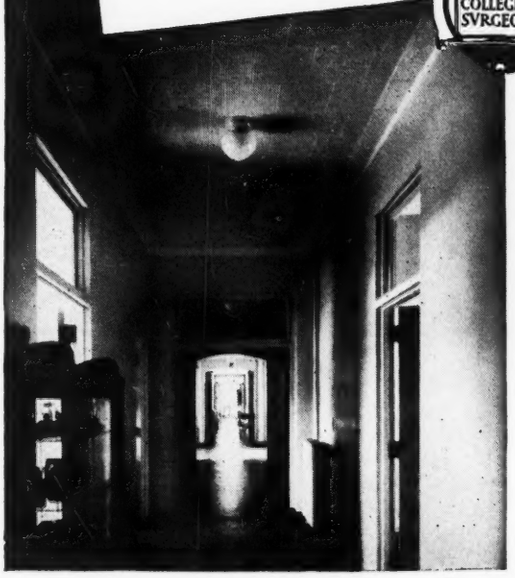

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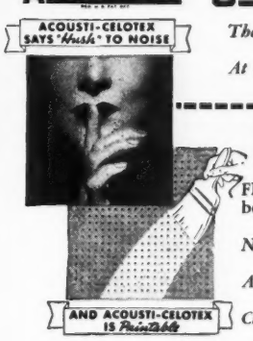

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County.....*State*.....

Medicine Outranks Education as Beneficiary of Foundations

Medicine and public health outrank education among the institutions toward which American foundations now grant an annual total of $38,500,000, according to a survey of foundation giving recently completed.

The survey, which included reports from 243 leading foundations, indicates that for medical research, medical education, the erection and support of hospitals and other purposes related to medicine and public health, foundations granted individuals and institutions more than one-third of their total disbursements, or $13,495,898, during 1937. An intensified interest in medicine and public health is further evidenced by the establishment of new foundations created specifically to lend assistance in this field.

The report also stated that the capital assets of American foundations have grown to a total of more than $1,200,000,000.

Death of Dr. Charles H. Mayo

Dr. Charles H. Mayo, co-founder with his brother, Dr. Will Mayo, of the famed Mayo Clinic at Rochester, Minn., died in Chicago on May 26 of pneumonia. While the Mayos are most renowned for their contributions to clinical medicine and surgery, they also have made outstanding contributions to medical education and to hospital organization. The Mayo Clinic embraces six large hospitals and skyscraper office buildings and laboratories. Many of today's outstanding physicians have taken graduate study as Mayo Clinic fellows. The educational work at the clinic is affiliated with the University of Minnesota and the Mayo brothers have given generously to the university.

Vermont Has Veterans' Hospital

A new Veterans Administration Facility at White River Junction, Vt., which will have facilities for 110 patients, has been opened. Prior to the opening of the hospital the nearest such institution for veterans was at Newington, Conn.

Nuns Ousted From Vienna Hospital

Nuns who have been engaged in nursing in one of the large hospitals of Vienna, Austria, have been notified that their places will be taken in the near future by members of Nazi girls' clubs, who have been ordered to learn nursing as speedily as possible.

Dr. John Allan Hornsby, first editor of The Modern Hospital, who died recently after a long illness.

Greater N. Y. Hospital Group Meets

The annual meeting of the Greater New York Hospital Association was held on Friday, May 26. One hundred and ten people attended the session. New officers elected include: John F. MacCormick, superintendent of the Presbyterian Hospital, New York, president; Leighton F. Arrowsmith, superintendent of St. John's Hospital, Brooklyn, first vice president; James U. Norris, superintendent of Women's Hospital, New York, second vice president; George F. Holmes, superintendent of Memorial Hospital, New York, treasurer, and William B. Seltzer, superintendent of Bronx Hospital, secretary.

Forth Worth Hospital Renamed

The name of Methodist Hospital in Fort Worth, Tex., has been changed to Harris Memorial Methodist Hospital, by action of the Central Texas Methodist Conference at its recent meeting. Decision to change the hospital's name was reached after Dr. Charles H. Harris, superintendent of the hospital, had made gifts of property and money to the hospital.

U. S. P. Revision Convention Called

The United States Pharmacopoeial Convention has issued a call for delegates to a revision convention to be held in Washington, D. C., on May 14, 1940.

Fires Destroy Hospitals in New York and California

Fire swept through the administration building of the Spadra State Narcotic Hospital near San Dimas, Calif., on May 10, virtually destroying the administration offices, the kitchen and the nurses' quarters.

Patients at the hospital helped to carry out valuable records before the offices were destroyed. None of the patients or employes was injured. The damage was estimated at between $40,000 and $50,000.

The Ontario County Tuberculosis Hospital at Holcombe, N. Y., first complete tuberculosis sanatorium constructed in New York State, was also destroyed by fire on May 31. There were no injuries or loss of life but officials of the state department of health pointed out that the destruction of the hospital emphasized the danger of housing patients in buildings of frame construction and urged that in every institution in which such a hazard exists steps should be taken at once to avert a possible catastrophe.

Union Announces Medical Plan

The Transport Workers Union of Greater New York has announced the inauguration of the "most extensive and comprehensive group medical plan yet undertaken." The union states that it will provide free of charge to members in good standing the full services of 52 general practitioners and specialists in eight fields of specialized medicine, including surgery.

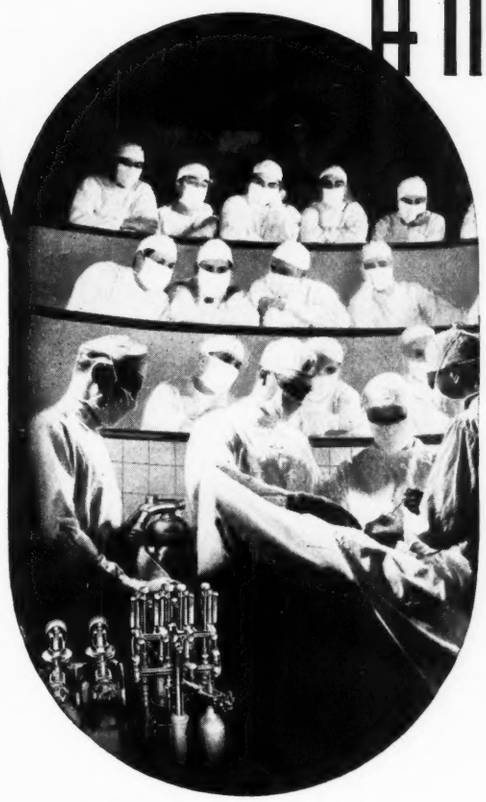
Memphis Plans for Negro Hospital

Building of a $250,000 hospital for Negro crippled children and the establishment in Memphis of the South's only center for the instruction of Negro doctors in orthopedic surgery constitute a 1939 civic project in Memphis, Tenn. A $250,000 bond issue is expected to be authorized by the legislature for the construction of a modern hospital building for Negro crippled children and a nurses' home.

New Hospital in Stamford

Plans are under way for a new Catholic hospital in Stamford, Conn., to be conducted by the Sisters of St. Joseph, and called St. Joseph's Hospital. The first unit will be a small general hospital so designed that it can be easily enlarged as more room is needed. Raphael Hume of Stamford is the architect and Charles F. Neergaard, New York, the consultant.

A MAJOR OPERATION



Under the stress of a major operation, patient and loved ones hopefully place their faith and trust in the reputation and skill of the surgeon and the efficiency and equipment of YOUR hospital.

The surgeon and your staff accept this faith and trust and its attendant responsibility.

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Names in the News

Administrators

ERWIN C. POHLMAN, superintendent of the Decatur and Macon County Hospital, Decatur, Ill., since 1935, has been named superintendent of the Grant Hospital, Columbus, Ohio, succeeding DR. M. F. STEELE, who became head of Christ Hospital, Cincinnati. Mr. Pohlman began his hospital career at St. Luke's Hospital, Denver, in 1928. Later he served as manager of the Kahler Hospital, Rochester, Minn., and then as assistant administrator of the University of Iowa Hospitals.

EDNA S. HINDMAN has been appointed administrator of the Grove City Hospital, Grove City, Pa., succeeding BLANCHE K. FLEMING.

THERESA SWEETMAN, superintendent of the City Hospital, Rushville, Ind., for the last seven years, resigned that position on May 15.

DR. E. L. RAGSDALE, who was appointed superintendent of the Central State Hospital, Nashville, Tenn., in November 1938, has resigned. Dr. L. S. LOVE will serve as acting superintendent.

DR. LEWIS F. SEAPY, resident physician at St. Mary's Hospital, San Francisco, has been selected to fill the position of medical superintendent of the Utah Tuberculosis Sanatorium at Ogden, Utah, which opened July 1.

DR. EDWARD J. MURRAY, superintendent of the Julius Marks Sanatorium, Lexington, Ky., took office as president of the Kentucky Hospital Association at the annual meeting of the organization. DR. PAUL A. TURNER, superintendent and medical director of Hazelwood Sanatorium, Louisville, Ky., was named president-elect.

GEORGE BUIS, assistant superintendent of the John Sealy Hospital, Galveston, Tex., has resigned effective August 1 to accept the position of superintendent of the Brackenridge Hospital, Austin, Tex. Mr. Buis went to John Sealy Hospital as an administrative intern and at the end of his internship was made assistant superintendent.

C. E. GRIFFITH has been appointed superintendent of the Western Oklahoma Charity Hospital, Clinton, Okla., to succeed DR. H. K. SPEED JR., who has been superintendent of the institution since it was opened.

MRS. THERESA LITTLEJOHN has been named superintendent of nurses of the Rideout Memorial Hospital, Marysville, Calif. She will succeed PAULINE WALDOCK, who has recently resigned.

Albert H. Scheidt, Chicago Hospital Council; G. W. Brugler, University Hospitals, Cleveland.

DR. G. W. BRUGLER has been appointed assistant to the director of the University Hospitals, Cleveland. Doctor Brugler was graduated from Western Reserve University School of Medicine in 1933. He served as assistant resident, chief resident and Hitchcock fellow in medicine at the University Hospital, Baltimore, from 1934 to 1937. Prior to his appointment to the University Hospitals in Cleveland, he was associated with the State Hospital, Columbus.

DR. G. LOMBARD KELLY, superintendent of the University Hospital, Augusta, Ga., resigned that position on July 1. Doctor Kelly, who is also dean of the University of Georgia School of Medicine, will become medical director of the hospital in charge of teaching beds. DR. WILLIAM HENRY GOODRICH has been appointed temporary superintendent for a term of from three to six months.

J. H. SCHREITER has resigned as superintendent of the Riverview Hospital, Red Bank, N. J. Mr. Schreiter, a retired naval officer with the rank of lieutenant, was formerly superintendent of the Fitkin Memorial Hospital, Neptune, N. J.

ESTELLE LABRUYERE, superintendent of Little Falls Hospital, Little Falls, N. Y., resigned that position on June 1 to accept an appointment in the state department of social welfare. Miss LaBruyere went to the Little Falls last fall to succeed BARBARA HUNTER.

DR. RICHARD W. SOPER has retired from active duty as head of the Veterans Administration Hospital at Sheridan, Wyo.

LEON H. HICKERNELL, chief pharmacist at City Hospital, Cleveland, was promoted to the position of assistant superintendent by the action of the city council. Mr. Hickernell has been associated with the hospital pharmacy department since 1926.

W. G. SIMMONS, assistant business manager of the Hinsdale Hospital and Sanitarium, Hinsdale, Ill., for the last three years has resigned from that position.

CLEMENT C. CLAY, M.D., assistant administrator of the University of Chicago Clinics, has resigned to accept the position of administrator of the St. Barnabas Hospital, Minneapolis. Doctor Clay succeeds SAMUEL W. RICE, who has resigned.

DR. RICHARD H. HUTCHINGS, the superintendent of the Utica State Hospital, Utica, N. Y., relinquished his duties on July 1. He is retiring under the compulsory age limit for New York State employes. Doctor Hutchings became superintendent of the state hospital twenty years ago after having served in the same position at the St. Lawrence State Hospital, Ogdensburg, N. Y., for sixteen years. He is a past president of the American Psychiatric Association.

MRS. MARIE SAEGER has resigned as superintendent of the Lutheran Good Samaritan Hospital, Fremont, Neb.

DR. W. C. TISDAL, superintendent of Western Oklahoma Tuberculosis Sanatorium, Clinton, Okla., has resigned to return to private practice. C. E. GRIFFITH, who was recently named head of the Western Oklahoma Charity Hospital at Clinton, has also been given the duties of business manager of the sanatorium.

Miscellaneous

ALBERT H. SCHEIDT, assistant administrator of the Indiana University Center since 1935, has been named executive director of the Chicago Hospital Council to succeed DR. ARNOLD F. EMCH, who resigned recently. Mr. Scheidt received his bachelor's degree at Indiana University and did graduate work in accounting and finance at Ohio State University. Prior to his association with the Indiana medical center, he was assistant auditor for an industrial firm. He is a junior member of the American College of Hospital Administrators.

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DePuy Manufacturing Co.	Warsaw, Ind.
Doehler Metal Furniture Co., Inc.	N. Y. City
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Faultless Caster Corp.	Evansville, Ind.
Finnell System, Inc.	Elkhart, Ind.
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Hospital Equipment Corp.	New York City
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Hospital Topics & Buyer	Chicago, Ill.
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Inland Bed Co.	Chicago, Ill.
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Johnson & Johnson	New Brunswick, N. J.
H. L. Judd Co., Inc.	New York City
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The Kent Co., Inc.	Rome, N. Y.
Samuel Lewis Co., Inc.	New York City
Lewis Manufacturing Co.	Walpole, Mass.
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Massillon Rubber Co.	Massillon, Ohio
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HOSPITAL·INDUSTRIES·ASSOCIATION HIA

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PROF. CLAUDE RIGAUD of Paris has been awarded the Katherine Berkan Judd prize of Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, for pioneer work in the field of radiophysiology and therapy. The Judd will provided a trust fund of $30,000, from the income of which a prize of $1000 is given each year to encourage research in the causes and cure of cancer.

STELLA MATHEWS, director of the Honolulu Nursing Bureau, has been awarded the Florence Nightingale Medal, highest international nursing award, by the International Red Cross Committee of Geneva, Switzerland. The award was given Miss Mathews for outstanding work with the United States Army and the American Red Cross in Europe following the World War.

DR. FRANCIS P. HAMMOND of the Woodlawn Hospital, Chicago, has been named medical director of the Chicago Plan for Hospital Care. His work will be to advise the hospital department regarding the application of the plan in cases in which doubt exists.

FRED G. SWAFFIELD JR. was elected president of the Hospital Care Corporation, Columbia, S. C., at the corporation's annual meeting. He succeeds DR. I'ON WESTON, who resigned recently. DR. FRANK C. OWENS and MRS. R. G. GASTON were reelected vice president and secretary, respectively. J. W. HUNT was named treasurer of the corporation.

Department Heads

THERESA E. SHIELDS, R.N., has been appointed director of nurses at St. Francis Hospital, Jersey City, N. J., succeeding LULA A. FLAIG, who died recently.

HELEN E. GILSON, executive dietitian of the Pennsylvania Hospital, Philadelphia, has resigned. For many years, Miss Gilson's name has been identified with all forward looking movements to raise the standards of food service. She is particularly well known for her research on china as applied to hospital use.

EMMA JONES has accepted the position of clinical supervisor at the Blodgett Memorial Hospital, Grand Rapids, Mich. Miss Jones was formerly associated with the Middlesex General Hospital, New Brunswick, N. J.

HARRIET KLEIN, formerly professor of medical nursing at Vanderbilt University, Nashville, Tenn., has been appointed director of nurses at the Tacoma General Hospital, Tacoma, Wash. Miss Klein was graduated from the Presbyterian Hospital School of Nursing in Chicago.

MRS. VERA S. BRANDT, director of nurses and nursing education at the Bradford Hospital, Bradford, Pa., died recently. Mrs. Brandt had been director of nurses at Bradford for six years. Prior to that she had been director of nursing education at Michael Reese Hospital, Chicago.

Trustees

DR. N. A. JOHANSON has been reelected president of the board of trustees of the Swedish Hospital, Seattle, Wash. Also reelected were HERMAN PETERSON, secretary, and CARL S. JOHNSON, treasurer. New officers are PAUL N. CARLSON, vice president, and Henry E. TURNER, financial secretary.

Hospital Annex Dedicated

The new annex to the House of St. Giles the Cripple, Brooklyn, N. Y., a hospital for crippled children, was dedicated on June 3 by Bishop Ernest M. Stires of the Protestant Episcopal Diocese of Long Island. At the ceremony Bishop Stires dedicated an altar in memory of the late Samuel M. Meeker, who was vice president of the board of trustees for many years.

Blood Storage Plants in London

Four large blood storing plants are to be established in London for use in transfusions in event of war time air bombings, it has been announced by the Red Cross in Great Britain. The blood will be kept in underground refrigerator plants, which, if necessary, will include provision for protected surgeries, laboratories, waiting rooms and homes for the staffs.

Coming Meetings

July 31-Aug. 12—Southern Institute for Hospital Administrators, Duke University, Durham, N. C.

Aug. 13-15—National Hospital Association, New York City.

Aug. 27-Sept. 1—American Dietetic Association, Ambassador Hotel, Los Angeles.

Sept. 5-8—American Congress of Physical Therapy, Hotel Pennsylvania, New York City.

September 5-16—Institute for Hospital Administrators, University of Chicago, Chicago.

Sept. 11-15—American Congress on Obstetrics and Gynecology, Cleveland.

Sept. 19-23—International Hospital Association, Toronto, Ont.

Sept. 21-22—Canadian Hospital Council, Toronto.

Sept. 24-25—American College of Hospital Administrators, Toronto.

Sept. 25-29—American Hospital Association, Toronto.

Feb. 22-24—Texas Hospital Association, San Antonio, Tex.

April 25-26—Mid-West Hospital Association, Kansas City, Mo.

Hayhow and Coler Address Executive Housekeepers' Group

(*Continued from page* 104)

National Executive Housekeepers Association were represented at the convention. Mrs. Doris L. Dungan, this year's president, and executive housekeeper of the West Jersey Homeopathic Hospital, Camden, N. J., was re-elected president. Other officers elected are: first vice president, Edythe Bussey, Schenley Apartments, Pittsburgh; second vice president, Alice Eldridge, Fairmont Hospital, Alameda County, California; recording secretary, Amelia Vossen, Hotel Barclay, Philadelphia; secretary-treasurer, Emily Barton, Hotel Collingwood, New York City.

Members of the national board of directors are: Marion Wyatt, Chicago; Sarah Jackson, The Inn, Buckhill Falls, Pa.; M. Agnes White, Hotel Coronado, St. Louis; Cara Burnett, Fort Worth, Tex.; Anne Owens, Sherry-Netherland, New York City; Helen Graham, Hotel William Penn, Pittsburgh; Grace Brigham, Providence-Biltmore, Providence, R. I.; Besse Best, Harmon Hotel, Minneapolis; Caroline Meyer, Stevens Hotel, Chicago, and Mae Scharlin, Hotel Lycoming, Williamsport, Pa. The last two were elected to replace retiring members.

All other members of the board were reelected.

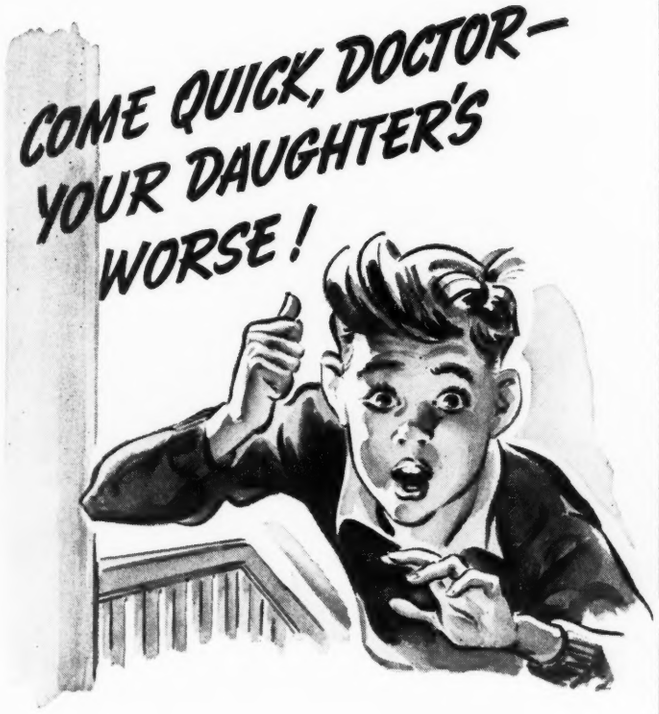
The 1940 convention will be held in New York City. Beginning in 1941 conventions will be biennial instead of annual.

Eight New Hospitals in C. H. C.

Eight new hospitals were admitted to the administrators' section of the Chicago Hospital Council at its recent meeting. Veronica Miller, administrator of Henrotin Hospital, Chicago, was elected chairman of the section to succeed E. I. Erickson, administrator of Augustana Hospital, who has served in that capacity for three years. The administrators' section is the successor to the old Chicago Hospital Association.

Biological Photographers to Convene

The ninth annual convention of the Biological Photographic Association will be held September 14 to 16 at the Mellon Institute for Industrial Research, Pittsburgh. The program of the convention will include discussions of motion picture and still photography, photomicrography, color and monochrome films and processing, all in the field of scientific illustrating.



IT was 44 years ago that Dr. William More Decker rushed home to answer an emergency call from his own family. His baby daughter, ill with a serious gastro-intestinal disorder, was much worse. The doctor was deeply disturbed.

He was convinced that this ailment, like similar cases he had observed, had been caused by dirty nursing equipment. But if nursing bottles couldn't be kept clean in his own family, what could he expect from other patients? Suddenly he had a thought. Why did bottles have to be made so very hard to wash? Why not a wide-mouth bottle easily kept clean and safe? Thus was invented and patented the Hygeia Nursing Bottle and with it the Hygeia natural breast-shaped Nipple.

During all the 18 years that Dr. Decker practised he insisted upon proper medical care before and after childbirth. Through his influence millions of Hygeia advertisements each month—in nearly every nationally-known magazine—tell women to *ask a doctor's advice.* And in return thousands of doctors recommend Hygeia equipment at every opportunity.

HYGEIA NURSING BOTTLE CO., INC.
197 Van Rensselaer St., Buffalo, N. Y.

Special offer to hospitals.
Hospitals may now buy Hygeia Bottles and Nipples at approximately the same cost as ordinary equipment.

HYGEIA
the Safe
NURSING BOTTLE AND NIPPLE

M. BURNEICE LARSON, DIRECTOR

Equipment *does* make a hospital great; but, men and women make it greater!

We've LISTS of the "finest in the land" . . . . lists of people for every finer task you have, LISTS from which you can choose one or two or ten or fifty . . . . spunky, eager, smart and pleasant, self-reliant people. Find YOUR personnel from such as these.

The world marvels at the ways they build great hospitals today . . . . but all they've done is but *half enough* until you "man" them with the finest people you can find.

Until *then* the thing is mute. Modern functional design, warm colors, an academic economy, are *as though they had never been* unless you've men and women of a super kind to start and keep it on its finer way.

The *fame* of all you do *depends* upon the nurses, the physicians, and the surgeons . . . . that are yours. Steel and stone and functional design have *much* to do but *less* than men and women when *they* have chins that tilt, and eyes that challenge every difficulty, and nimble, skillful fingers, and wisdom, and understanding, and eager intent, and comfortable, pleasant ways.

You *need* not have less.

You *can* have such as those.

We will find them for you.

We've spent our lives, have learned *the ways* to find them, have won their understanding faith and confidence. Ask us for them, for folks who would help you make *your* hospital *greater.* That is our great work.

THE MEDICAL BUREAU
55 E. Washington Street
CHICAGO, ILLINOIS

BOOKS ON REVIEW • • •

MEDICINE IN MODERN SOCIETY. *By David Riesman, M.D. Princeton: Princeton University Press,* 1938. *Pp.* 226. $2.50.

HEALTH INSURANCE WITH MEDICAL CARE: THE BRITISH EXPERIENCE. *By Douglass W. Orr, M.D. and Jean Walker Orr. New York: The MacMillan Company,* 1938. *Pp.* 271. $2.50.

These two studies indicate the broadening interest of physicians in social questions and the excellent work that some of them can do when they turn their attention to such subjects. Doctor Riesman recalls that medicine formerly was one of the subjects studied by all cultured men, just as they studied history, language, literature and the beginnings of science. He believes that medicine should reassume this place and has written his book for the intelligent layman who wishes to know the basic principles of medicine. Doctor Riesman shows himself to be a broad social philosopher who can deal with controversial subjects without bitterness or partisanship.

The Orrs have made a good study of health insurance from a somewhat novel viewpoint. All persons interested in this subject would do well to familiarize themselves with these first-hand observations of just what English doctors and workmen think about health insurance. Two conclusions stand out rather clearly: first, that the British laborer now obtains quite good medical service and, second, that there is a tremendous amount of unnecessary overlapping and duplication of effort owing to the categorical approach to the problem. — ALDEN B. MILLS.

THE MEDICAL STAFF IN THE HOSPITAL. *By Thomas Ritchie Ponton, B.A., M.D. Chicago: The Physicians Record Company,* 1939. *Pp.* 288. $2.50.

No more important task confronts the trustee and the director of a hospital than that of choosing the institution's medical staff, establishing and maintaining cordial and cooperative relationships with the staff and providing the equipment and auxiliary service essential to its effective functioning.

Doctor Ponton in his latest book sets forth the ideal relationship to be maintained by the governing body of the hospital and its professional staff. He epitomizes this in the opening sentence of his preface in the following well-chosen words:

"Undoubtedly the medical staff is the most important part of the organization of the hospital, the smooth functioning of which is absolutely essential if the combined efforts of the hospital and its medical staff are to succeed in fulfilling the mutual obligation to render service to the community."

The first three chapters of the book present this interrelationship phase of the subject. These are followed by chapters on staff organization, meetings, medical records, professional accounting and the resident staff. Most of these chapters follow rather closely the principles and standards of staff organization, responsibilities and ethics that have been put forth by the American College of Surgeons.

In like manner the standards of the American and Canadian medical associations for hospitals approved for intern training provide much of the pattern for the chapter on the resident medical staff.

This book is a valuable addition to our limited amount of literature in book form on the general subject of hospital administration and management. It should prove especially useful to the hospital that is trying to develop its staff organization along tested and approved lines. It is a work that many a hospital administrator will wish to see on the reading list of the members of his institution's professional staff. — JOHN E. RANSOM.

ARE YOUR WAXED FLOORS REALLY *Safe?*

• • • Here's a truly non-slippery wax—the more you use, the less slippery the floor will be!

RUBBER GLOSS "aerated" FLOOR WAX

Ask Your Distributor to bring you the unique Rubber Gloss Testing Kit. Then you'll KNOW which wax is best for slip resistance, water resistance, ease of application, lustre, wearing qualities, coverage, etc.

Used by wise maintenance men the country over because of its ability to lay a hard, dry, wear-resisting, *non-slippery* but glossy film of protection on every waxable surface. Don't risk the possibility of trouble resulting from falls. Make sure *your* floors are SAFE!

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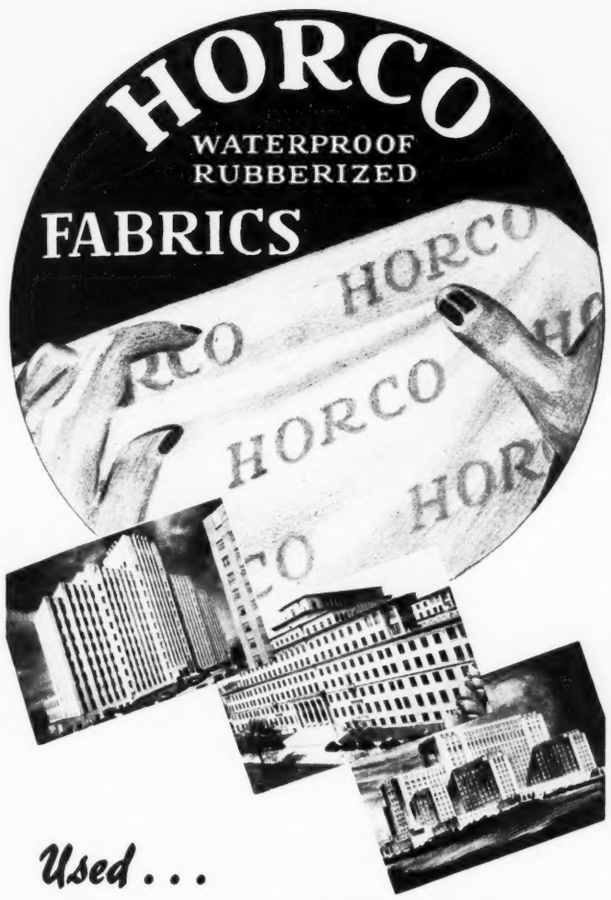

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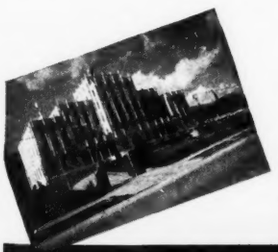

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Samples on request. Ask your Dealer for prices on yardage.

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Why Do Hospital Superintendents CHOOSE GERMA-MEDICA?

THOROUGH-CLEANSING. Germa-Medica is a perfectly-balanced and blended, chemically-pure soap. Thus, the powerful detergent lather of Germa-Medica penetrates the pores, quickly removes dead tissue and bacteria, and leaves the hands in excellent condition.

SOOTHING TO THE SKIN. The generous amount of purest olive oil contained in Germa-Medica keeps the hands soft and pliable — no matter how frequently Germa-Medica is used. Thus, Germa-Medica gives a thorough, scrub-up without the risk of irritation.

GERMA-MEDICA IS ECONOMICAL. Since Germa-Medica contains no wasteful fillers, every drop is pure, active soap. That is why you can dilute one quart of Germa-Medica with 3 parts of water and get one gallon of thorough-cleansing soap . . . at the lowest possible cost.

EFFICIENTLY DISPENSED. When you dispense Germa-Medica from Levernier Portable Foot Pedal Dispensers, you obtain asepsis with efficiency. These dispensers act with precision. They are easily sterilized. Furnished free to quantity users of Germa-Medica.

The HUNTINGTON LABORATORIES Inc

DENVER • HUNTINGTON INDIANA • TORONTO

GERMA-MEDICA

AMERICA'S FAVORITE SURGICAL SOAP

RELAXATIVES • • • • •

It Won't Work

• *Dr. G. Harvey Agnew of Toronto, president of the American Hospital Association, in a speech at Seattle deplores the sort of love and romantic courtship habitually depicted by the movies. The racial stock, he says, would be much improved if young people, on the verge of matrimony, would sanely discuss heredity and eugenic laws instead of trying to emulate screen lovers.*—NEWS ITEM.

"Look, Sylvia, at the stars twinkling above us, and the warm, friendly lights of the city blinking on the far shore. It's beautiful out here on the lake tonight, Sylvia, drifting . . . just drifting . . . I feel as though I could always drift like this, and, somehow, I feel this night belongs to us.

"And you are beautiful tonight, too, Sylvia. The soft curve of your throat and——Sylvia, all evening I have been working up my courage to tell you something——Sylvia, will you——"

"Please, Harry, please! Before you say what I think you're going to say, I think you and I ought to discuss heredity and eugenic laws sanely. I mean, in all fairness to the future betterment of racial stock."

"Sylvia, on a night like this——"

"Grandfather Brown, on father's side, is a little peculiar. He goes and visits with relatives for months on end."

"He does, eh?"

"Yes, and he spends most of his time writing letters to Roosevelt. I mean Theodore Roosevelt. He thinks the Spaniards have got him prisoner."

"Really?"

"Cousin Martha, on father's side, clips verse out of newspapers and reads it aloud. Nothing violent about her, of course. I don't mean that we lock her up in the attic when company comes, or anything like that." . . .

"Is that so?"

"And now we will discuss your family, and then you may tell me what you were going to say."

"All I was going to say was I wonder if you would grab that other paddle so we can get back to the boathouse quicker. All my family are susceptible to bad colds from paddling around damp lakes in the middle of the night. I gotta get home quick and rub on a little liniment."—DOUG WELCH.

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Ho Hum Department

• ". . . presented her with one dozen hand towels—scenting perhaps the advent of the pernicious paper towel which has since become the particular delight of the hospital administrator and the abomination of the medical profession."—*Canad. M. A. J.* **28**:553

—and scenting perhaps also the greasy germs on the gray roller towel of yesterday.

Filed for Reference

• The following letter was received by the head of a nurses' training school from a colored applicant.

Dear Miss ————:

I knew that I had an unusual low scholastic in high school when I sent in my application the first time, but I have a reasonable excuse.

Due to the fact that my parents made their departure when I was quite small, and I having to go to school by chances, made it difficult for me to gain the knowledge that the average child gained. But I have brains and muscles and I feel that I could do mental or physical work like the other students. I am almost positive that I could accomplish something if I had a possible chance.

Respectfully yours,

REPAIRS
HOSPITAL INSTRUMENT *Reconditioning*

By **WECK**

5 Day Service

We Get Them Monday — We Ship Them Friday

REPAIRS — spell economies for hospitals from Coast to Coast when done by Weck. Hospitals have learned not to buy Repairs on price alone. Consider scissors. They can be done more cheaply if they are not taken apart. Send for our Bulletin on the Sharpening of Scissors and learn how many different operations your scissors go through when Weck-repaired and you will understand why the best repair job is the cheapest.

Weck-repaired instruments are those that stand up the longest. We do not claim to give you lowest prices, but we do give your surgeons instruments upon which they can rely implicitly when a life may hang in the balance.

Crodon-Chromium Plating, used exclusively by Weck, not only makes instruments good to look at, but also gives them greater resistance to rust.

Are you getting our Bulletins on the Care of Instruments? If not, ask us to send them.

From Holyoke Hospital, Holyoke, Mass.

"May I take this opportunity of expressing our appreciation and satisfaction with your instrument service. The instruments came back in very good order and in every case practically as good as new."

S. J. Barnes,
Supt.

EDWARD WECK & CO., INC.
135 JOHNSON ST. • BROOKLYN, N.Y.

CRODON
The Chrome Plate

A DISCOVERY

TRADE-MARK

Recently a southern hospital superintendent discovered that his practice of buying surgical instruments from the lowest bidder was increasing the cost of instruments.

The shorter life of cheap instruments required more frequent replacements.

He has again returned to quality, convinced that paying a little more is economy.

This proves the age old rule—"we only get what we pay for."

Every surgeon knows the trade-mark that stands for quality. He also knows that quality instruments give him no trouble.

To save money and criticism, specify and insist upon quality.

Kny-Scheerer instruments, stainless steel or chrome, cannot be had at the lowest price. Low price and high quality do not go together.

KNY-SCHEERER CORPORATION

The Quality House

21-09 BORDEN AVENUE, LONG ISLAND CITY, N. Y.

The Kny-Scheerer Company was taken over by the United States Government, and sold by the alien property custodian in 1919 to Americans, and has so remained. The staff is composed entirely of Americans, and is conscientiously devoted to the one purpose of serving our industry in America.

. . . Like a Human - it BREATHES from the TOP

The higher you go, the purer the air. Septisol Dispensers capitalize on this truth by "*Breathing*" from the top—not from the floor level where dust and dirt can contaminate the air. It's another reason why surgeons and hospital superintendents alike are so enthusiastic about this better and more economical method of scrub-up room technique . . . The modern way for the modern hospital.

Read these other advantages of SEPTISOL DISPENSERS:

1. Control Valve—This simple regulating device controls the flow of soap, ranging from a few drops to a full ounce. This exclusive feature eliminates all waste.
2. Combination Spout Swivel Device and Filler Plug permits spout to swing from left to right. Removable to permit easy filling.
3. Horizontal Dispensing Spout cuts down overall height; eliminates dripping.
4. Air Intake Valve. Foot operated—pneumatic pressure does the work.

SEPTISOL SURGICAL SOAP is prepared specifically for use in scrub-up rooms. It lathers to a smooth, creamy richness, and helps eliminate danger of infection and roughness that comes from the use of harsh and irritating soaps. Made from pure Olive Oil, Cochin Cocoanut Oil, and other fine vegetable oils.

Septisol Dispensers are furnished in three models, Double Portable, Single Portable and Wall Type.

VESTAL CHEMICAL LABORATORIES, INC.

ST. LOUIS NEW YORK

READER OPINION

Rating Employes

Sirs:

I am interested in obtaining information on any method that has been devised to rate hospital employes in regard to their ability. I would appreciate any data on this subject and am enclosing an addressed stamped envelope.

ROLLIN V. HADLEY, M.D.,
Assistant Superintendent.

Westborough State Hospital,
Westborough, Mass.

Rating hospital employes must be considered as one of a series of steps in personnel management that include first, job definitions or descriptions; second, job analysis; third, job classification or grading; fourth, development of salary scales, and fifth, employe rating. While there are few publications on these subjects that deal primarily with hospitals, there is a good deal of literature on the subject as applied to industry, much of which may be transferred, with appropriate changes, to hospital employment.

Books and articles to consult include:

Kroeger, Gertrud: "An Attempt at Job-Grading in a 100-Bed Hospital," The HOSPITAL YEARBOOK, *14th Edition, p. 78.*

Lott, Merrill: "Wage Scales and Job Evaluation." New York: Ronald Press, 1926. *Pp.* 161. $5.

Tead and Metcalf: "Personnel Administration: Its Principles and Practice." New York: McGraw-Hill. Third Edition, 1933. *(See especially section VI on research and section VII on rewards.)*

Hopwood, J. O.: "Salaries, Wages and Labor Relations." New York: Ronald Press, 1937. *Pp.* 124. $2.50.

Dickinson, Z. Clark: "Compensating Industrial Effort." New York: Ronald Press, 1937. *Pp.* 470. $4.50.

Riegel, John W.: "Wage Determination." Ann Arbor: Bureau of Industrial Relations, University of Michigan, 1937. *Pp.* 138.

Clarke, Walter V.: "Rating Employees," Personnel Journal, September, 1926. *Pp.* 100.—Ed.

"Play Therapy" Helpful

Sirs:

The article "Play Therapy—a New Science" that appeared in the April 1939 issue of The MODERN HOSPITAL is just the type of article I have been looking for for some time.

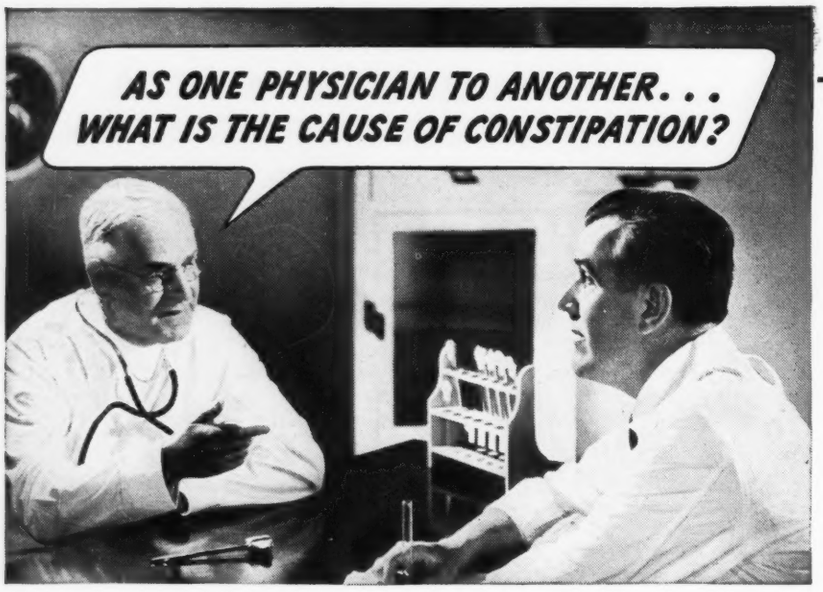
In our occupational therapy program for the children in a general hospital we have been working under three divisions: (1) scientific treatment by a therapist, (2) diversional and educational work by volunteers trained by us and (3) school studies by volunteer teachers.

Our hospital files for the diversional program contain reading material to help the volunteers meet the needs of the convalescent child but the greater part of the material is devoted to craft instructions and patterns. I believe Miss Kawin's article will answer many of the problems that we encounter with the various age groups.

I am anxious for each volunteer to have an opportunity to read Miss Kawin's article and I hope that you will have another paper on a like subject before long.

ESTHER S. HOLLAND, O.T. Reg.

Occupational Therapy Dept.,
Hartford Hospital,
Hartford, Conn.



OBVIOUSLY, there is no single cause. Each case must be judged on its own merits. Anatomical differences, variations in diet and habit and specific pathological entities all enter into the cause. However, it is safe to say that faulty habit plays a role in the great majority of cases, and that loss of neuro-muscular tone is a very common secondary factor.

To make habit training easier, a bland, pure mineral oil is important. To increase tonus of debilitated intestinal musculature and nervous system caused by Vitamin B-1 deficiency, pure crystalline Vitamin B-1 has been found to be of great value.

In *Vita Nujol*, these two important aids in the relief of constipation have been combined.

Vita Nujol is a smooth, pleasant-tasting emulsion of pure mineral oil with pure crystalline Vitamin B-1 added in such quantity that the suggested average dosage is the average adult maintenance dose of that important food factor (400 International Units).

Vita Nujol has a place in the treatment of the majority of constipation cases, and also in the gastro-intestinal syndromes of chronic alcoholism and many other pathological states associated with Vitamin B-1 deficiency.

Vita Nujol has been thoroughly tested and proven in laboratory and clinic.

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A postal card will bring you free samples and descriptive literature. Stanco Inc., 1 Park Avenue, New York, New York.

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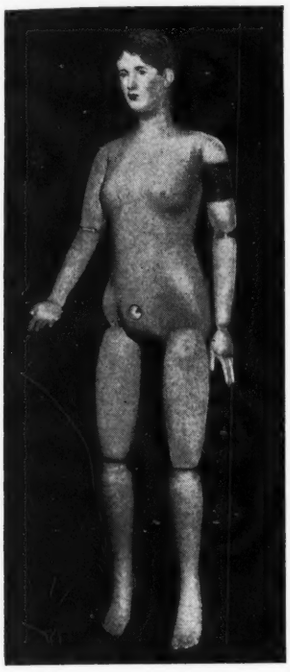

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This remarkable adult size doll incorporates many important training aids never before available. It provides for NATURALISTIC Catheterization, Bladder Irrigation, Vaginal Douching, Colonic Irrigation, Administration of Enemas, Hypodermic Injections.

New Hip, Knee and Elbow Joints give natural movements to legs and arms.

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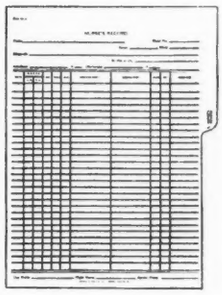

No. 5 NURSE'S RECORD

	Form No	
Summary	"	1
Physician's Directions	"	2
Progress Record	"	3
Graphic Chart	"	4
Nurse's Record	"	5
Laboratory Record	"	6
Case History	"	7
Anaesthesia Chart	"	8
Operative	"	8-C
Ear, Nose and Throat Record	"	9
Pregnancy and Labor Record	"	9-OB
Obstetric Record	"	10-C
Newborn Record	"	10-NB
X-Ray Requisition	"	10-XR
Consultations	"	11
Fracture Record	"	12
Religious Record	"	13
Eye Record	"	14
Diet Record	"	15
Diabetes Chart	"	16
Diet Record for Diabetics	"	17
Admission Agreement	"	18
Analysis of Hospital Service	"	19
Dental Record	"	20

TOP OPENING AND SIDE OPENING COVERS

Hospital Accounting System

MANUAL
FREE TO ALL USERS

	Form No.	
General Cash Receipts	"	1
General Cash Disbursements	"	2
Petty Cash Voucher	"	3
Voucher Register	"	4
Voucher Distribution	"	5
Voucher	"	6
Patients Registry Card	"	7
Daily Census	"	8
Daily Report of Special Charges	"	9
Patients Ledger	"	10
Board and Room of Patients	"	11
Stores Requisition	"	12
Stores Record	"	13
Payroll	"	14
Income and Expense Statement	"	15
Balance Sheet	"	16
Journal	"	17
Patients Register	"	18
General Ledger	"	19

BINDERS AND INDEX SHEETS WITH TABS

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Unit Air Conditioners

THE Cubinette A COMPLETELY ENCLOSED AIR-CONDITIONED CUBICLE FOR NORMAL FULL-TERM INFANTS

This Modern Protection Against Cross-Infection Provides Individual Isolation Within the Nursery and Greatly Improves Present Nursing Technique

A scientific safeguard for newborns entrusted to hospital care. The CUBINETTE is of steel construction with a white, baked-on enamel finish, and shatter-proof glass. It is of sufficient size to permit full care as well as storage space for individual nursing accessories. It maintains the proper body temperature of the infant by a thermostatically controlled heating unit that can be regulated as prescribed by the physician. It also provides for an automatic, uniform flow of clean filtered air. The CUBINETTE has been thoroughly tested and is in actual use. Write TODAY for detailed information.

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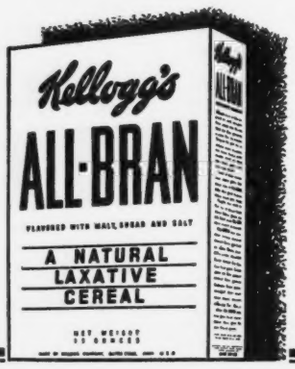
Serve Kellogg's
ALL-BRAN

More than a breakfast food, it's a way of keeping "regular" that millions follow every day

Serve the individual package



IT'S SAID THAT—

The "phantom doorman," a new invention of YALE & TOWNE MANUFACTURING COMPANY, Stamford, Conn., opens and closes doors automatically, either by photo-electric control or by push button.

The HILD FLOOR MACHINE COMPANY's (Chicago) new all purpose vacuum machine has 15 attachments for wet or dry vacuuming of upholstery, rugs and carpets; for cleaning overhead pipes, venetian blinds, walls, draperies and between radiator coils, and for blowing out motors and other machinery. . . . Tubular fire escapes built by the STANDARD CONVEYOR COMPANY, North St. Paul, are entirely free from rivet or bolt heads and no raw edges of the metal are exposed; the entrance to the escape is fitted with two doors, both of which are opened by the operation of a panic bar on either of the doors.

"Ways to Save Time in an Office," a 20 page brochure issued by the BURROUGHS ADDING MACHINE COMPANY, Detroit, discusses ways to eliminate useless and time wasting operations and suggests short cuts and simplification of routine work. . . . A new catalog has just been released by the NATIONAL TIME & SIGNAL CORPORATION, Detroit, describing its line of Syncrotime clocks and program equipment for hospitals and schools; copies are available on request. . . . To overcome the difficulty of adapting new sizes of lamps to existing equipment, a new adjustable socket has been manufactured by the GOODRICH ELECTRIC COMPANY, 2900 North Oakley Avenue, Chicago; it provides vertical adjustment for the proper positioning of lamps in reflectors.

A 32 page booklet on zeolite water softening, including mining, processing, manufacturing and uses of Permutit zeolites has recently been published by the PERMUTIT COMPANY, 330 West Forty-Second Street, New York. . . . Zytor, a new nonabsorbable suture, recently announced by the Curity laboratories of the LEWIS MANUFACTURING COMPANY, Walpole, Mass., is recommended for skin and stay sutures because it is noncapillary, chemically inert and forbids tissue infiltration. . . . The GLYNN-JOHNSON CORPORATION, 1821 Berteau Avenue, Chicago, has marketed a silencer made of live molded rubber; a pneumatic air pocket forms when the door closes and compresses the silencer.

A new safeguard in the administration of anesthetics is offered by the OHIO CHEMICAL & MFG. CO., 1177 Marquette Street, Cleveland. The device, called the Hi-Co CO_2 Detector, prevents the danger of the patient's breathing unusual quantities of carbon dioxide and warns the anesthetist when the soda lime should be changed. . . . The MECHANICAL LABORATORIES, INC., Miami, Fla., have recently introduced the Sur-Mask, a surgeon's mask made of impermeable material so that bacteria in the air of exhalation cannot pass through it. . . . A new booklet that describes Thermax structural insulation, a building material that combines strength, decorative qualities, thermal insulation value and sound deadening properties, has just been released by CELOTEX CORPORATION, Chicago.

Frank W. Tufts, advertising and sales promotion manager of the CONTINENTAL STEEL CORPORATION, Kokomo, Ind., died suddenly on May 24, following an emergency operation.